

GREEN'S FRUIT GROWER

The Oldest Fruit Journal in America



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Green's Fruit Grower

Soil Requirements of Baldwin Trees

Written for Green's Fruit Grower By Earle William Gage, N. Y.

The commercial importance of the Baldwin apple variety is steadily becoming more manifest throughout the East. The soil which this variety demands being quite apart from that of other types of fruit of the apple family, and being a contributing factor to its successful and profitable production, should interest all fruit growers.

If soils are thought of as grading from heavy to light, corresponding to the range from clay to sand, then soils grading from medium to semi-light fulfill best the requirements of the Baldwin, more particularly under a system involving such average cultivation as is usually practiced in commercial plantings. The group would include the medium of light loams, the heavy sandy loams, and medium sandy loams provided they were undrained by soil material not lighter than a medium loam nor heavier than a light or medium clay loam of friable structure.

The surface soil should contain an appreciable amount of sand. The sands, moreover, should not be of one grade—that is, a high percentage of coarse sand would give a poor soil, whereas a moderate admixture of it with the finer grades of sand, together with sufficient clay and silt, would work no harm. In general, the sand content should be of the finer grades, but soils also occur though comparatively rare, which would be too heavy for this variety were it not for a marked content of the coarse sands, the effect of which is to make the soil mass much more friable and open than would be expected with the presence of so much clay.

Such conditions are found in Perry County, Pa. Soils having the above characteristics dry quickly after a rain, and are not to be classed as moist soils. They will never clod if worked under moisture conditions that are at all favorable. The subsoil on the other hand must never be heavy enough to impede ready drainage of excess moisture, and it should be sufficiently clayey to retard a good moisture supply—that is, plastic, not stiff.

If the subsoil be so clayey or heavy that moisture does not percolate freely down through it readily, or if the same result is caused by hardpan, a Baldwin of poor quality as to color, with a skin more or less greasy is the usual result. The best results are secured, other circumstances being equal, from warm and "kind" yet not too sandy soils. Such soils can be so managed as to secure a sufficient but not excessive vegetative growth, the balance between it and the growth of fruit being readily maintained, a condition necessary to produce the best developed and highly colored fruit.

On the heavy soils, where the Baldwin matures slowly, and is dark and dull at harvest time, the fruit sometimes possesses unusually good keeping qualities, and in some cases the color develops satisfactorily by midwinter. For storage purposes such fruit is considered high grade, attaining the best late season prices.

To modify the physical condition of a sandy soil, by the addition of humus, until it resembles a sandy loam as far down as the tree roots extend, is too expensive a process to merit use, and as orchards are grown for profit the soils on which they are to be planted should be so selected from the different varieties as to furnish the most favorable conditions possible before going to the additional expense of trying to change their character by artificial means.

Nevertheless, soils so deficient in humus as to be leachy in the case of sandy, and stiff, intractable, and cloddy in the case of clays, clay loams, and loams, should have their humus content increased until these unfavorable conditions for crop growth of any kind be overcome as far as practicable, it is impossible to ignore the effects of the inherent physical character of the soil itself as related to adaptation to crops, and in many cases at least, varieties of the same crop. It is easily possible on soils of medium texture to accentuate the vegetative habit of the Baldwin that the color become impaired. In current orchard practice this is a common occurrence which growers seek to overcome by withholding ammonia-carrying fertilizers, by checking tillage, and by avoiding humus-forming cover crops. It lowers cost of production to let nature help as much as possible.

The greatly superior color of the fruit from some orchards on mellow, friable

loams, when compared with the fruit from other orchards on a more retentive kind of soil and subsoil, elevation, slope, methods of culture, and fertilization being about the same, gives striking evidence of the great importance of the soil factor in growing high grade Baldwins. On just this basis the fruit from some orchards sells for a higher price than that from others. This illustrates the economic advisability of selecting the orchard site with soils adapted to the variety to be planted.

Editor's note: While apples and other fruits succeed better on some soils than others they will produce well on almost any soil except the hardest clay that bakes in the sun.

White Grub

Green's Fruit Grower: Can you tell me what to do to get rid of grub-worms? They are very numerous. Do they injure plants? I find several hills of strawberry plants dead. Do not know what kills the plants unless it is the grub-worms. What do they eat?

Will write my experience as an amateur fruit grower in a 100 x 165 foot lot in the

THE ROSE-CHAFER

Beetle Damages Vegetables, Fruits and Flowers—Early and Persistent Control Measures Necessary

Whole vineyards and orchards often are devastated and whole crops in certain sections of the country are destroyed. Besides the damage done to vegetation, the beetles sometimes cause the death of young chickens. The chickens eat the beetles and poisoning results in the death of the chicken within 24 hours. Experiments have developed the fact that from 15 to 20 beetles are sufficient to kill a week-old chick.

The character of the soil bears an important relation to the appearance of the rose-chaffer. Light sandy regions are greatly preferred as a breeding ground, while clay lands, unless near sandy soil, are seldom troubled.

Methods of Control

A thoroughly effective remedy against this insect is yet to be discovered. Any application that may be made is unsuccessful unless applied almost continuously, for as often as the beetles on a plant are killed, others arise from the ground or from neighboring fields to take their place. Many so-called "sure" remedies, including com-

men whom I have met in my travels and in my business. A movement for a family orchard on every farm is favored as a most laudable activity by professors in agricultural colleges, by men high up in the government agricultural departments and by broad-minded and well-read citizens in every corner of the country, and there is no one who cannot say that the proposition is not only possible but easy of attainment.

Most pear orchards that were set some years ago were trained with the tall central stem and it has been found that the blight is particularly difficult to handle in these trees. Later plantings have been trained more in the usual shape of apple trees. If the central stem is to be discarded it is better to let it grow for a few years. When trees are set care should be exercised that branches are not left that are directly opposite. A better way is to leave the buds in alternate positions up the stem. Allow the main stem to remain but cut it off several inches above the highest branch. Bend the leader to one side where it may be kept in position until it becomes well established and appears as one of the branches. In young trees leave the branches six inches apart. When the tree comes into bearing it should not have more than three or four main branches. If there are too many they will grow tall and slender and lack in strength.—Nat. Stockman.

Lime is as essential to the upbuilding of American farms as is the use of good seed and teams. Too many of our fields are yielding light crops simply because there is not enough lime to permit the growing of soil-building crops. More lime means better green manure crops, more humus, better storage of moisture, heavier yield of the money crop, and more profit for the farmer.

Fruit Thinning

The other day I heard a farmer complaining about his prospects for an apple crop. It seems there had been a wealth of bloom, the trees were a mass of blossoms. Then the petals dropped and a little later a big percentage of what might have been apples followed suit. It looked to the somewhat inexperienced owner like all his crop was "dropping" when it was really a good thing for the trees and for the crop prospects. Most fruit can stand a good thinning. When the bloom has been heavy and is "set" and started on its development the tree is likely to be overburdened. In some big commercial orchards where there are hundreds and even thousands of trees to look after, the job of thinning is undertaken as a part of the season's work. It can be done on farms where there are only a few dozen trees and the time put in at the task will be well spent.

There is no one thing that will improve the size, appearance and quality of fruit quite so much as thinning. About half the apples should be removed in most instances. It will mean bigger, better and more splendidly colored apples and will prevent the breaking down of tree limbs and the general smashing up of fruit trees. There are any number of very good reasons why thinning should be practiced both in the big commercial orchards and in the farm orchard where the family supply is grown.

Out of Doors

Written for Green's Fruit Grower By L. Myrtle Sours

The fields were thick with yellowed wheat, All shaded with green it stood; They gently waved in the quiet breeze, And the heads of the wheat looked good. The oat fields passed as the train moved on. Stood high in some and dark and strong, While one was low and of tender green, With the heads in the stalks but barely seen.

Trees by the fences went spinning by, The cherry, dark, with its pointed leaves, The locust, climbing toward the sky— But for oak tree and pine my spirit grieves. The trees of dark red cherries stood Loaded with shining fruit; While rambling roses, bright and gay, Blossomed in beauty along the way. Vines twined around the tree trunks tall That stood 'mid rocks and underbrush; A stream of water moved along With quiet gurgle or noisy rush. Wild carrot bloomed like silver lace, And yarrow grew in pink and white; Among the blackberry vines they stood Or scattered wildly as they would.

Some Good Things In This Issue

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city. Have been working on my orchard five years. It is an eye-opener to lots of visitors and my little plot is watched with interest by numbers of folks who are interested in flowers, fruit and vegetables. I have 16 kinds of apples, 6 kinds of peaches, 4 kinds of cherries, 5 kinds of plums, 6 kinds of pears, English walnut, pecan, strawberry, blackberry, raspberry and grapes. Made a failure of currants and gooseberry; my plants all died. I have numerous flowers, including peonies, dahlias, spirea, roses, jasmines, bulbs and hardy and tender annuals, something in bloom all the year, and some vegetables to eat when I want them. Am a mail-carrier and a bachelor, so have plenty of time to work.—H. G. Nixon, Ala.

Reply: This is an old inquiry answered by us hundreds of times. The white grub is the larva of the May beetle. I know of no way to destroy it except to dig it out and crush it. Strawberry should not be planted on newly turned sod ground, which is apt to be full of white grubs. After the soil has been cultivated a year or two the white grubs gradually disappear.

pounds of copper, lime, kerosene and tobacco, have failed to give results when put to a rigid test. Whatever practice of a remedial nature is undertaken, whether collecting or spraying, it should be begun at the first onset of the insects' attack and continued until they disappear. The work should not be confined entirely to those useful plants which it is particularly desired to preserve, as the insects attack many other plants.

Why Don't They Plant and Eat More Fruit

No farmer can call himself independent who must rely on others to furnish him with such simple farm products as apples, peaches, plums, pears and cherries. Furthermore no farmer can call himself up-to-date or progressive who is willing to acknowledge himself licked by that miserable pest the San Jose scale or any other known orchard pest.

The matter which I have written in this article is not my own private opinion alone but it is the consensus of the opinions of hundreds of wide-awake and progressive

Volume

Pe

Too many the best. A turning back peaches were grown by thought of the in view there trees which g and yet were On these season beaut the bough in viously and grass, because to cultivate the cultivate the that we have chard work a) We learn t man who goe really does n have in his n is picked bef basket, as it peach. As I travel ticularly on back yards of many residen often see from peach trees t three years p ing fruit. K the peach is fully what a to the owner when spring of a beautiful b from the peac is to come a fo the Early Cr the earliest pe ford is compa eties having b most of whic freestone, and As the seas in the home urance of gr become perce large globes o spread with c son commerc these garden t to ripen upon season is doub such a varie Stump a seas the further w longer the fru better flavored E. P. Roe u pick and eat bees had disc meaning that pick when fir must wait un is somewhat t you approach bees and was are there ar trees attracti the demands c I never get tree hedge th the cheapest m the boundary city lot. The to 18 inches of the lot. If peach grower this way, he strange to rela

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Peaches Like Father Used to Grow

By C. A. GREEN

Too many of us think it is the old things which were the best. As regards peaches there is a reason for this turning back to old days. When I was a boy on the farm, peaches were not thought of as a marketable product to be grown by the acre. In those good old days we simply thought of the peach as a garden product. With this idea in view there were ever in my father's garden a few peach trees which gave evidence of being forty or fifty years old, and yet were perfectly vigorous and healthy.

On these old time peach trees I could always find in season beautiful, ripe, juicy peaches all ready to drop from the bough into my hands, or had dropped the night previously and were now lying in the grass at my feet. I say grass, because in old times it was not deemed necessary to cultivate the soil in which the peach tree grew, nor to cultivate the soil of the orchard. It is only in recent years that we have found that careful cultivation pays in orchard work almost the same as in the corn or cotton field.

We learn then from the old time peach culture that the man who goes into market and buys a basket of peaches really does not know what it is to hold in his hand or to have in his mouth a delicious peach, for the peach which is picked before it is matured and allowed to mature in the basket, as it must if sent to market, is but an apology for a peach.

As I travel through the country, particularly on the cars, I get a glimpse of back yards or gardens located at the rear of many residences. In these back yards I often see from six to twelve beautiful young peach trees that were planted there about three years previously and which were bearing fruit. Knowing as I do how attractive the peach is in the home garden, I realize fully what a joy these few peach trees are to the owner of the house and lot. Here when spring opens and summer is promised a beautiful bouquet of blossoms leaps out from the peach trees, giving promise of what is to come a few months later. In old times the Early Crawford was known as about the earliest peach, but now the Early Crawford is comparatively late, much earlier varieties having been introduced in recent years, most of which are clingstone, but others freestone, and some of them yellow fleshed.

As the season advances, our peach trees in the home garden develop notable luxuriance of growth and little fuzzy knobs become perceptible, which later develop into large globes of pure white or yellow over-spread with crimson blush. The peach season commercially does not last long, but with these garden trees, where the fruit is allowed to ripen upon the tree, a few each day, the season is doubled in length and we have for such a variety as the Crawfords or the Stump a season of three or four weeks, and the further we progress in the season, the longer the fruit hangs upon the trees, the better flavored it becomes.

E. P. Roe used to say that the time to pick and eat the blackberry was when the bees had discovered the sweetness thereof, meaning that the blackberry was not fit to pick when first it becomes black, but we must wait until its juices are matured. It is somewhat the same with the peach. When you approach the peach trees and hear the bees and wasps buzzing about you may be sure there are some ripe peaches on these trees attractive enough in flavor to satisfy the demands of a prince.

I never get tired of telling about a peach tree hedge that I once planted, thinking it the cheapest method possible for me to shape the boundary lines of the back portion of a city lot. These peach trees were planted 12 to 18 inches apart on one side and the end of the lot. If you were to ask an experienced peach grower if peaches could be grown in this way, he would shake his head, but strange to relate, this peach tree hedge was

a notable success, and yet it received no attention in the way of cultivation and pruning. The house and lot were leased to people not interested in their welfare, but notwithstanding the neglect and the closeness of the planting, these trees bore fruit in amazing quantities year after year for many years. Surely I do not advise this method of growing peaches, which in order to develop at their best should be not less than 6 to 12 ft. apart, and in field culture at least 12 ft. apart each way. Sometimes when I went to this city place to collect the rent, the housewife would take me to her cupboard and show me the jars of yellow peaches which she had canned, and she would relate to me how they had picked all they could eat and had given the neighbors many besides those she had canned. I know of no more attractive adjunct to the home garden than the peach.

Peaches for Market

Not long ago a friend of mine in the west near Portland, Oregon, wrote me that he was about to plant 150 acres of peach trees and apricot trees and asked for my advice. I advised him not to plant so large an acreage of so perishable a fruit as peaches and apricots. I explained to him that there were few more perishable fruits than these and that they ripened at a season when the weather was hot

and when the greatest care must be taken in shipments. I called his attention to the number of laborers which would be necessary to harvest 150 acres of perishable fruit. It would in fact take an army of laborers. He persisted in his purpose, however, but I have not learned what was the result. Though we have about Rochester, N. Y., peach orchards of 10, 20, 50 and possibly a few of nearly 100 acres, I would not advise my friends, especially those who have farm work on hand, to plant very large peach orchards, believing that those of moderate size can be made more profitable than very large orchards.

There is always a demand among the farmers and villagers for peaches. Even when the city markets are glutted, fairly good prices can be secured from the farming community, which teaches us that there are many people on farms and in villages who do not grow a home supply of fruits of any kind except possibly of the apple, and of these they have only a few varieties, such as the Baldwin or Greening, knowing little of the superior varieties and of others ripening at various dates earlier.

Of late years great interest has been taken in peach growing commercially. Large peach orchards have been planted in localities where many years ago peach growing was abandoned owing to the supposition that the winters were too severe. Western New York was for a long time abandoned as a commercial peach growing district. A neighbor and friend of mine, Daniel Rogers, having a fertile farm situated on an elevated site in the town of Wheatland, about fifteen miles southwest of Rochester, was daring enough to plant 20 acres to peach trees notwithstanding the fact that his neighbors, friends and the community as a whole considered his undertaking almost certain to result in loss, but this orchard proved to be a great success, and Mr. Rogers, who was 70 years old, reaped a large reward. People came from long distances to see the remarkable productiveness of his peach trees. He was a good business man, a good manager of details. He was the first man, so far as I can remember, who built racks on wagons, which enabled him to carry two stories of peaches, one tier above another. In these wagons he dispatched daily large quantities of peaches to the Rochester market where they were sold at high prices. It did not seem to him necessary to ship any of his fruit to more distant points. The fruit grower who can find a home market for his product has an advantage over the man who must ship long distances, for the expenses of shipment and selling at the point of destination, and the risk of delays, make serious inroads into his profits.

The peach is a far more perishable fruit than the apple or pear or the grape. During the excessively hot weather when the bulk of the peach crop is shipped, great care must be taken to avoid depreciation of the fruit, and sometimes it seems impossible to escape decay of the fruit. In the past season many carloads of superior peaches arrived in Chicago in such poor condition it was necessary to dump them into the garbage heap.

Daniel Rogers' notable success in peach growing for market led numerous others to plant peach trees, until now western New York has a reputation throughout the country as a peach growing district, from which possibly a thousand carloads are shipped each season, mostly to eastern markets. Many of these growers have become experts in peach growing, having studied the situation carefully and having discovered many valuable details in pruning and planting, cultivation and fertilizing of the soil, which enables them to outstrip their neighbors. These men are frequently called upon to stand up before large gatherings

(Continued on Page 4)



Putting Covers over Peach Baskets

When baskets are thus covered they can be stacked one above another during shipment. When peaches are intended for sale in nearby markets they are more often covered with red mosquito netting. Peaches sent north from the far south come in crates filled with small baskets, which insure greater safety than when shipped in the ordinary peach baskets.

Currants are Profitable

C. L. BURKHOLDER, '15 in The Agricultural Student

The currant has often been called a "miserable fruit," but about seven years ago the price of currants went up to a point where it is now one of the most profitable of fruits. There are several possible reasons for this, the main ones being the almost total disappearance of the back yard currant patch, the San Jose scale, and the currant worm. The San Jose scale particularly in the past few years has attacked and destroyed almost all the little patches of currants that were not scientifically handled and it was these little patches of currants in the garden and back of the rhubarb plot that had been supplying the bulk of the crop.

There has been a great increase in the plantings of this fruit among the progressive fruit men in the last six or seven years, but even this increased planting does not seem to be keeping pace with the dying out of the small garden patches. It seems possible that in the future the bulk of the currant crop will be raised by the man who makes a study of fruit growing, or at least pays more than ordinary attention to this line of work.

The currant is one of the easiest plants to propagate. A fresh green cutting placed in the ground in the spring and given a little cultivation and attention during the summer will at the beginning of the next year have a fine root system developed, and be ready to plant in the permanent bed. These young plants are taken from the cutting bed and planted in rows which are about six feet apart. The plants are usually placed about four feet apart in the row. If they are supplied with plenty of fertility they will very soon take up all this room. The distance between rows allows a team and spray outfit to drive straddle of a row very nicely. A long tiling spade is used to do the planting. The spade is shoved straight into the ground, then tipped forward a little and the cutting dropped down back of the spade; it is then pulled out and the cutting firmly packed in place with the foot.

The currant plant begins to bear by the third year. Very little trimming needs to be done during the first four or five years, as the young currant plant like a young tree will produce large perfect fruit even though the bush be a little thick. At the end of that time some of the oldest wood must be removed each year; how much depends on the fertility of the soil and upon the variety of currants. If the soil is a rich black sand, in which the currant thrives best, they will not have to be cut quite so strongly. If too, the currant is of the Cherry Currant type they will not need to be pruned so heavily. It is usually a safe plan to remove one-third of the old wood each year, as it is the old canes that produce the small, inferior fruit.

Some of our best orchard men at the present time use the currant profitably as a filler in young orchards. The bushes may be planted with or between the rows of trees. In many cases the regular program of using early bearing varieties of trees is also used. The currant prefers a little shade; the currants will hang on the vine for several weeks after they are mature, provided they are not directly exposed to the rays of the sun all the time. The writer has seen at least one fruit grower picking currants in a twenty-year old plum orchard, two weeks after the ordinary season for currant picking was past. Moreover these currants brought \$1 per bushel more than those which were picked in season. These currants were grown on the same ground which a little later on matured a fine crop of plums. They did not interfere with cultivation in the least and were taking up ground that would have otherwise been wasted.

The writer has kept records of 34 currant bushes. The fruit was picked on each bush separately each year and the returns recorded. Using this data as a basis, a currant bush ought to produce 51 quarts during the first 15 years of its life, allowing for complete failures of 2 of the 15 years. At 8c per quart, which is considerably lower than they have been bringing the last five years, this would make the gross receipts average 27c per bushel for each of the 15 years, making average gross receipts of \$490 per acre. There are some other interesting figures with reference to these 34 currant bushes. In the year 1912 at the age of eight years they produced six bushels of currants which brought gross receipts amounting to \$18. The space covered by these bushes amounted to 810 square feet. Accordingly \$36 worth would be produced on 1620 square feet of this patch. This is the same area that is ordinarily covered by an apple tree. This row of 34 bushes was no different than any other rows in this block, and in the year of 1912 this particular block produced at the rate of \$970 per acre. The expense of picking, packing and marketing of currants is higher than that of most any other fruit, amounting to about 34% of the gross receipts. But even after deducting this amount it is found that in the last seven years the currant stands at the top of the list when compared for instance with plums, cherries and apples.

It is by the goodness of God that in our country we have those three unspeakably precious things: Freedom of speech, freedom of conscience and the prudence never to practice either of them.

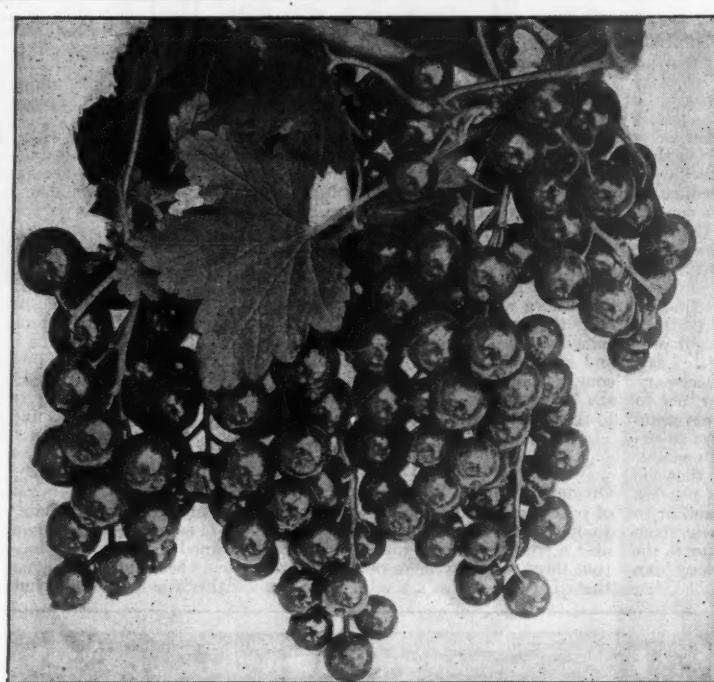
A Pertinent Question

A writer in "The American Magazine" says:

United States has 108 savers in 1,000.
Italy has 228 savers in 1,000.
England has 302 savers in 1,000.
Germany has 317 savers in 1,000.
France has 346 savers in 1,000.
Sweden has 386 savers in 1,000.
Belgium has 397 savers in 1,000.
Switzerland has 544 savers in 1,000.
The war will teach us some salutary lessons. It will teach us what we Americans have never yet learned, what real thrift means.

Foreigners who visit us for the first time are amazed at our wastefulness. The Belgian Commissioners who came over in 1914 could hardly believe their eyes.

"On our ride to Chicago," said one of them, "we saw



Diploma Currants

hundreds of miles of fertile land lying fallow. We saw orchards and fields with ungathered products rotting on the ground. We saw miles of young trees being destroyed by fires started by engine sparks and being left to burn unnoticed. Everywhere the farms and residences were divided by wooden fences that contained enough lumber to build the home of an empire.

"In the country, wasted land; in the cities, wasted men. On the trees and plants, ungathered food; in the centers of population, hungry people. These are the economic elements of American life. If any country in Europe had such bounteous wealth, such limitless land area fit for cultivation and such unused labor energy it would be quickly transformed into prosperity beyond dreams. Why, in Belgium, even our dogs work. Every city lot is cultivated and most of our garden back yards."

Saving that is systematic rapidly becomes the most fascinating game in the world. There are few things quite so awe-inspiring as the workings of compound interest. A man of twenty-five, earning \$20 a week, who will put \$5 a week into the savings bank at four per cent, drawing out the total each time it reaches \$1,000, and investing in six per cent bonds, that man at fifty-three will have an income of \$20 a week from his savings. In other words, in twenty-eight years he will have doubled his income. Suppose, on January first you figure that problem in arithmetic out for yourself. There's a world of encouragement in it.—Woman's Home Companion.

When to Pick Pears

The old rule for picking pears is that when the stem parts from the branch by lifting the fruit the fruit should be picked. But when the pears are fully grown they should be picked. Do not wait until the fruit is colored or until it is soft. Clapp's pear can be picked when it is greener than the Bartlett since Clapp's pear is more liable to rot at the core than Bartlett. We market our Clapp's as soon as they have attained good size. The pears are as hard as bullets when packed and shipped, but they soon color up and soften so as to be eatable and ready for consumption. Should you attempt to ship ripe summer pears they would arrive at the destination rotten and worthless.

Emerson once said: "I do not like to hear one say he loves nature; I like to see him show it in his life." And that is possible for all—to make their lives truer by loving nature. It should be the gospel of every family. It should be a large part of the education of all the children.

Trimming Bush Fruits and Grapes

After years of experience in the growing of bush fruits and grape vines I am satisfied that if there is one thing that is more essential than another to produce a good crop of good fruit, that one thing is proper pruning at the proper time, because no matter how good the cultivation, unless the bushes or vines have been properly pruned there will be a crop of only inferior fruit at best, says Geo. J. Foster, Illinois, in The Fruitman and Gardener.

Both the raspberry and blackberry produce fruit only upon canes of the last season's grower, and are dead and worthless as soon as the berries are harvested. As their places are being supplied by a growth of new canes at the same time the crop of fruit has been maturing, the old and dead canes should be removed and burned in order to destroy all disease germs, insect pests, etc., as soon as possible after the berries have been gathered.

The stools or plants with the young canes should be kept clean from weeds and cultivated until about August 1, when they may be left until the following spring. After the cold weather is past and the buds begin to swell and are ready to put forth is the proper time to prune and shape the vines for fruiting. At this time cut out all weak canes and abnormal growths and shorten in the branches of the strong canes at least one-third their length, and if they have been injured so that many of the buds seem weak and unable to start it will be necessary to cut them still more severely. Vigorous pruning promotes strong growth in the part remaining which is the object desired; because long straggling branches with little life or vitality in them can never produce a crop of good fruit.

Gooseberries and currants produce their fruit in the same manner as the raspberry and blackberry, that is, upon the wood of last season's growth, but from the fact that their canes live on from year to year the method of pruning will of necessity be entirely different, also from the fact that they are so extremely hardy that the canes are never hurt by the winter, as well as the fact of their putting out both leaf and blossom very early in spring, both of which make it most desirable to prune in the fall. After the leaves have fallen there is no better time for this work than the month of November. In pruning them the age of the cane has not so much to do with it as the vigor maintained. The usual tendency of these bushes is to produce annually a large number of small weak canes and care must be taken to cut out most of these and to thin out the superabundance of small twigs that will be found on the older canes; remove all abnormal growths and leave the plant in condition to set a limited amount of fruit only, for if left to themselves they will be sure to set a much larger amount of fruit than the plant is able to mature properly and the result will be a crop of inferior fruit.

Like the currants and gooseberries, grape vines should always be pruned in the late fall or early winter months and never in spring. If the pruning is done in spring, the vines are sure to lose so much sap from "bleeding" that much of the vigor of the vine is lost and consequently the fruit crop suffers in just that proportion. The grape is always grown upon canes of the present year and not upon the canes of last season, hence it is necessary to prune away or cut off the major part of last season's canes, leaving a few buds only at the base or near the older wood to produce the canes that are to become fruit bearers. Four or five buds or even two or three therefore will be sufficient for this purpose. It will be found also that the best fruit will be nearest the main stalk or stem of the plant. For this season also leave a very few buds only for fruit bearing, a few good young canes being worth much more than a quantity of poor weak ones. Note by C. A. Green. My experience is that the new growth of blackberry bushes, if cut back as noted, will produce far less fruit than those not cut back.

Ordinary Cement is Not Water-Proof

Many people have an idea that ordinary cement and concrete are water-proof. But this is a mistake. Thousands of dollars have been spent in efforts to find some way of making water-proof cement-work.

To show that cement absorbs water, it is only necessary to call attention to the difference in color of a cement or concrete building before and after a rain. In damp climates the moisture often penetrates the entire wall and makes the whole building damp.

In these days when cement and concrete are used more and more for cellars, basements, silos, and even roofs, the value of water-proof, oil-mixed cement is hard to overestimate. See Public Roads Bulletin No. 46, which can be obtained by sending ten cents to the Superintendent of Documents, Government Printing Office, Washington, D. C.

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Making Young Trees Hardy

Written for Green's Fruit Grower By
EARLE WILLIAM GAGE

There seems to be a tendency for young nursery stock and trees to grow later in the fall than would be good for its life results, which means increased danger from winter injury than is true with older stock. If the young trees enter the winter with well ripened, mature wood they will withstand a much greater degree of cold without injury than when the branches are in a green, sappy condition, due to late growth.

A common method of inducing the young trees to stop growth in early fall, so that the wood might become thoroughly ripened and mature, has been to plant cover crops in the orchard either in late summer or early fall. In eastern fruit growing sections these crops may be planted to grow throughout the fall, living even over winter. These crops utilize in their growth a large amount of soil water up to the time when freezing weather sets in. They therefore tend to dry out the soil. This in turn, reacts upon the trees, checking their growth and inducing early ripening of the wood.

In a recent experiment to determine the action of cover crops on young trees, exhaustive study of the value and methods of handling different cover crops to secure hardiness of peach trees one to four years old was carried on.

It was found that rapidly growing peach trees of this age are rendered hardier, both in wood and fruit bud, by the use of cover crops that serve to check growth in late summer, but that while cover crops are valuable in lessening winter injury they are not so important as the choice of hardy varieties or the selection of a comparatively high site for the orchard. In other words, a very tender variety cannot be grown successfully even by resorting to cover crops, and no variety is as reliable on low ground with a cover crop as a hardy variety on high ground without. On high ground, the hardy varieties were found to be more reliable producers with the aid of the cover crops.

The ideal cover crop is the one that starts promptly into growth as soon as planted, which insures an even stand and chokes out the weeds. The crop should grow vigorously to insure a heavy winter cover and to dry the ground out comparatively early in the fall. It should be such as will be killed by early frosts, so that it will stop drying the ground after danger of late tree growth is past, thus permitting the retention of all the rains of fall in the soil for winter use. The cover crop should be heavy enough to furnish as good direct protection as possible against the freezing and thawing of the ground, and it should stand sufficiently erect to hold snow against the power of strong winds. A winter covering of snow is most effective as a means of protection from deep freezing of the ground and from alternate freezing and thawing. On rich soil, all things considered, millet is satisfactory.

Grass Mulch Method

The method of orchard culture now commonly accepted by horticultural investigators in the east, and quite commonly recommended as sound, is to clean cultivate early in spring up to the middle of summer, then seed the orchard down to a cover crop. This cover crop in its fall growth tends to evaporate the moisture from the soil, as above outlined. The trees enter the winter in a well matured condition. Although this method has been modified in various sections of the United States and Canada, so as to fit local conditions, the idea of thorough cultivation in the orchard, for at least a portion of the season, has been regarded as essential to success.

The average results of the different methods of orchard culture is quite markedly in favor of planting in sod and mulching the trees. In fact, at the Ohio station, trees planted in this way made a heavier and more vigorous growth than under a system of culture, producing double as much fruit with less energy taken from the tree.

Bees Needed to Distribute Pollen

An abundance of honey bees is a safe-guard to horticulture. They are the greatest factor in the distribution of pollen among fruits and berries. A few other insects carry pollen, but if all honey bees were removed during fruit bloom season, it is safe to say that there would be not enough fruit or berries produced to pay for the gathering of the crop. Wisconsin horticulturists producing annually thousands of dollars worth of fruit and berries recognize the value of bees as pollenizing agents and either keep bees in, or nearby their orchard, regardless of whether or not, any honey is produced.—Wisconsin Bulletin 264.

Clay Soil for Pears

It is universally agreed that a heavy clay soil is best for the pear. There are various reasons for this, the principal one being that clay soil is always rich in mineral fertilizers, while a sandy or gravelly soil is deficient in this kind of plant food. But the clay soil, though rich in phosphates and potash may not have them in available form, and may need a dressing in spring of these minerals



The above apple tree is the Gano, eight years old. This is the fourth crop of apples this tree has borne. Its crop this year is about six bushels of superior apples. Mr. M. T. Newman is the figure to the left. The figure at the right is Eugene Aton of Kentucky.

in available form. Trees on clay may need dressing of available potash and phosphate in the years when the tree is bearing. On sandy soil the pear tree always needs these manures. The pear roots deeply, so that it is never affected by droughts, and in clay soils it doubtless draws mineral fertilizers from the subsoil below where the roots of grain and other crops usually grow. It is a great mistake to allow the tap root of a pear tree to be cut off before it is transplanted.

Baskets for Packing Apples

Green's Fruit Grower: Here is a little kink that has helped us. It is in regard to the 1-bushel stave hamper apple basket which in many ways has always seemed an ideal package to us, except for the time it has taken to face it up nicely. Here is the way that we met the problem that permits us to send out the bushel hamper faced up as nicely as a barrel or boxed fruit:

We simply buy basket sides and covers for what is known in this section as the Hann basket,—a basket with the bottom of the staves finished with hoops like the top and in which the ordinary bottom is simply a piece of veneer slipped inside to rest on the hoops. We buy them with the veneer bottoms left out as just stated, and buy solid wood bottoms of the right size separately. Then, to pack our baskets, we first tack in the cover with the basket empty, slip in a corrugated cushion and waxed paper disk on top of it through the bottom, after which the hamper is faced and packed through the bottom as one would a barrel.

Such a package is the right size for family use and opens up as nicely as could be desired. We packed nearly 8000 of them last year and found them far easier to handle and nicer to pack than barrels.

This hamper arrangement was entirely original with me and I had thought to patent it, but found that the idea was covered by one taken out in 1873. According to the results that we have obtained with the use of the hamper, I think that we may confidently expect such a type of hamper largely to supersede the barrel for use with eastern fruit growers. At least, it gets in under the western box with something that is not aping the west, for it has the same size as the box and all the advantages that go with this size; it shows the fruit up to splendid advantage when opened; it costs enough less to purchase and pack than the western box to make any difference in price that similar fruit is likely to bring almost equal and, last but not least, although this is not generally known, the open package will save apples better in cold storage than in tight barrels.—H. T. Demarest, N. Y.

Fire Protection on the Farm

Written for Green's Fruit Grower By
EARLE WILLIAM GAGE, Asheville, N. Y.

Every farm should possess a bucket of water kept in some handy place ready for use in case of fire emergency, for so very effective is a handy bucket of water when the fire starts that the insurance underwriters grant a much lower rate of insurance to manufacturers and merchants who willingly keep a specified number of filled pails in proper locations in their buildings. Or, the newer form of protection may be used, the fire extinguisher. I use the little knap-sack spray pump for this purpose; keeping it filled with water, with air pressure on, and hang it in some handy location, where it may be used at a minutes' notice, with effective results. In fact, I feel that with five gallons of water, that may be sprayed in even stream, that I have a fighting chance, even with a goodly sized fire, where a bucket of water might not be of as much avail. Therefore, two direct and useful needs are fulfilled by the use of the air-pressure spray pump with me.

It is a very poor policy to rely upon buckets or tanks that are unfilled until the time of the fire, as two or three valuable minutes are lost at the very outset in locating the buckets. A bucket, with rounded bottom, should be provided for each floor of the house and barn, and situated near the stairways, and near the entrances, that those entering in a hurry may locate the buckets at once. These pails should be closely watched every week, to note that the water has not evaporated, as will be the case, and refilled.

As cold weather approaches, the great need of these pails will be manifest, when pumps and taps are frozen, and the time expended in thawing out the supply would also be consumed in a devastating fire. The fire risk is far greater in winter, when all the stoves are aglow with a merry flame, and the opportunity of the attic and rooms along the chimney catching fire are very good.

To keep water from freezing, the Department of Agriculture recommend adding a little more than two pounds of calcium chloride to each gallon of water. The use of this chemical will also serve as a preventative against evaporation. Such a fire-preventative will serve equally as well as the more expensive, and will insure the farmer against a total fire loss.

It is a poor policy to allow piles of rubbish to accumulate about the premises, as well as straw and hay to remain in piles on barn floors, which might become a pile of flames in a few seconds in case of overturned lanterns or dropped matches.



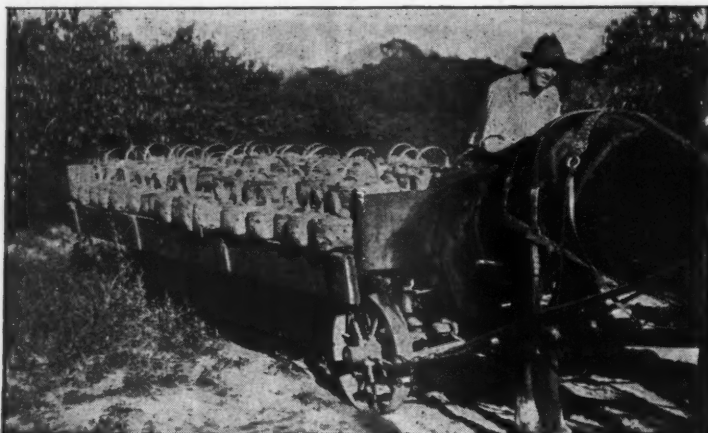
Scene in the orchard of W. W. Brayshaw of Illinois, representing the Yellow Transparent apple, trees of which are fourteen years old. Mr. Brayshaw, the owner, is driving the spring wagon. The apples are packed in one-third bushel baskets and are shipped in ice cars to Chicago, where large quantities have previously been sold. Last year ten carloads in ice cars were shipped in July and sold at \$1.75 per bushel. This year he is setting out 1000 more Yellow Transparent apples, 1000 Duchess and 1000 Leland Raspberry apple. Here is evidence that summer or early fall apples are profitable.

Peaches Like Father Used to Grow

(Continued from Page 1)

of fruit growers and tell at length how they prune their trees, how they fertilize the soil, how they market their fruit.

It must have been fifteen years ago that I accepted an invitation from J. H. Hale to visit his peach orchards in



Here is an unusual wagon intended not for carrying peaches to market, but for drawing them out of the orchard as fast as they are picked.

Georgia. I cannot recall how many acres he had planted to peach trees, but my impression is that there were several hundred acres all under excellent cultivation. The trees were thrifty, healthy and luxuriant and bore evidence of careful training. Not far from Mr. Hale's orchard were others equally large. Therefore possibly there were a thousand acres or more of peach trees in this one section of the country. These peaches ripening early were forwarded to the eastern and northern states far in advance of the ripening of varieties in the north, therefore sold at higher prices, but the growers were subjected to severe railroad rates which cut into their profits. It was necessary for Mr. Hale to train a large number of colored men, women and children in picking and packing peaches. These laborers became so skillful Mr. Hale decided to bring them all east to his Connecticut orchard, where hundreds of the Georgia colored men were engaged in picking and marketing the Connecticut peach crop. As may be imagined it requires considerable executive ability to handle the peaches from 100 acres or more.

Yellow or White Fleshed Peaches

In early days the white peaches were called Sweetwaters. I cannot remember that names were given peaches in the days of long ago. There are many people who consider white peaches the most delicious. As a rule they are more juicy than the yellow varieties, also more tender skinned, which seems to make the white fleshed peach less reliable as a market variety than the yellow fleshed. The yellow peach when canned, or when cut up fresh and placed upon the dining table, makes a better showing than the white fleshed varieties, thus the canners prefer the yellow peach.

The texture of the skin of the peach is of vital importance to the commercial peach grower. The most notable example of a thin skinned peach is the Elberta, which has the toughest skin and will bear shipment longer than any other peach known. The thickness of skin also makes the Elberta the longest keeper of peaches. I have seen the Elberta in ordinary storage keep two to three weeks after picking. Some white fleshed peaches are so thin skinned that it is hardly possible to market them without injury. Such a variety is the Early Rivers, a very early peach of large size and good flavor.

The Crawfords, Early and Late, may be considered the parents or the grandparents of the yellow fleshed peaches. There are at least a hundred varieties of yellow fleshed peaches which are somewhat like the Crawfords in size, shape, color and quality. This gives evidence of the fact that there is a tendency of the Crawford peaches to reproduce themselves, although this cannot be relied upon. I have seen at large fruit exhibits dozens of varieties of yellow peaches which differed but little from the Early Crawford. The Elberta is something of a Crawford type, though more elongated in shape and somewhat larger in size.

I have seen the original Elberta tree growing on the grounds of my friend Samuel Rump of Georgia, who planted twelve acres to seedling peaches and found only one of the many hundred trees on these twelve acres which he considered worth preserving or propagating, and that he called the Elberta.

I am often asked what varieties of peach I would suggest. In reply I would always include the Elberta, which I consider a remarkable peach, unsurpassed in many respects. I would include in the collection both the Early and Late Crawfords. The Late Crawford is not so productive as the Early Crawford, but usually it sells at a higher price owing to its later ripening. Crosby owing to its hardness

of bud and bloom is a valuable variety, especially for the home garden. It is not a large peach, but it has a small pit and is of most delicious quality. Fitzgerald also is a hardy peach which bears fruit earlier than any other variety I know, but it has a tendency to overbear, therefore unless thinned the fruit will be small. Mountain Rose is a valuable white fleshed peach, as is the good, old-fashioned Stump. Not wishing to confuse the mind of planters, I will not mention very many varieties. Greensboro is a good early peach. Foster, Chair's Choice and Old Mixon are valuable. A new, very early, yellow fleshed, freestone peach was first made public by Prof. H. E. Van Deman, and is now offered for the first time. He has said it is the best of the very early peaches. The Hale peach is a new variety of very large size, beautiful and of fine quality.

Cold Storage for Peaches

Cold storage, of course, still further lengthens the possibilities of the marketing season for any given variety. Peaches may be put in cold storage in about the same way as apples, the temperature required varying from 33 degree to 38 degrees F. They are usually stored at a temperature a few degrees higher than that in which apples are stored; in fact, are given the treatment of summer rather than winter fruit. Unfortunately, peaches do not stand cold storage as well as apples. This is especially true of summer peaches. Extra precautions are necessary in both picking and handling the fruit before it is put in



Photograph of the three story wagon used in the peach orchard near Rochester, N. Y., for carrying peaches to market. The wagon box itself is first filled, then the second layer and finally the third layer. It is important that the wagon should have springs, otherwise the fruit would be liable to be jammed on the way to market.

storage, and in the subsequent handling after it is taken out. Cold storage peaches are very apt to blacken and become unsightly after they are taken out of storage, even though they may be in fairly good condition. Summer peaches, particularly, are inclined to lose their flavor in cold storage. Kieffer, Anjou, Bosc and some other late varieties, when put into cold storage hard and green seem to stand the treatment very well and come out several weeks afterward in nearly the same conditions as that in which they went in. They may then be brought into a warm room for a few days before they are wanted and ripened up nicely for eating.—United States Department Year Book.

How about the bare spots on the lawn? If there are any they will now show up in all their unsightliness and should be either raked over and seeded or sodded. If more food is needed, broadcast some fertilizer just before a rain. Nitrate of soda is good, and the proper proportion is about 100 pounds per acre. See to it that dandelions or other troublesome weeds are not allowed to go to seed on the lawn.—F. H. Sweet.

Make the Farm Home Attractive

In the design and construction of the farmhouse the question of utility alone should not be the determining factor. The first thought should be the making of a home. The amount of money to be invested in the building of the home should not be determined by its relation in size to the balance of the plant, nor by the amount that is necessary merely to provide a shelter, but the amount to be invested should be that which the owner may reasonably afford without financially crippling himself too severely. The average city dweller in buying a house for a home does not proceed solely on the basis of what he can expect to secure in case it is ever desirable to place the house on the market. He is not likely to consider the purchase of a home as a financial investment but as a social one, which will enable him to secure for his family the comforts and conveniences that he could not secure in a rented house, and to have for his family a genuine home, a genuine home life. If he is able when the time arrives to dispose of his property to financial advantage, well and good; if not, he considers, and properly so, that he has made a good investment from the social side.

There is no panacea that will cure the yearning for city life evidenced by the country boys and girls of today, but there are certain conditions, which, if established, will add materially to the attractiveness of life in the country, and should therefore prevent them from flocking to the cities merely to avoid life on the farm. It is not to be expected that every person reared on a farm will desire to follow farming as a life work, nor is it necessarily desirable that they should do so, says E. B. McCormick, Office of Public Roads and Rural Engineering. Yearbook, 1915. Many of the boys will feel a calling to one or another of the professions, and it is probable that if allowed to follow their bent they will be far more successful and contented than if overpersuaded to stay with the farm. The problem is not to force the boy or girl to remain on the farm, but to assist them in every way in making an intelligent choice. Their choice can not possibly be intelligent unless they are familiar with farm life under its best conditions.

A Letter from the West

Mr. C. A. Green: I have taken Green's Fruit Grower several years and appreciate it very much. Though I am not a fruit grower, still I find so many fine poems and good common sense editorial hits and useful advice I feel I cannot afford to be without it. We live 412 miles northwest of Omaha in Nebraska, 25 miles south of Pine Ridge Indian Agency, South Dakota. Our altitude is 3750 feet. Our products are live stock, wheat, oats, corn, alfalfa and potatoes, hundreds of cars of which are shipped from here annually. We have a fine soil and a delightful climate. Land is worth from five to forty dollars per acre. This year in many cases the crop more than paid for the cost of the land. Garden truck is doing well. I have never been east of Chicago, but my father was raised in western New York.—H. O. Morse.

Cultivate the asparagus bed and keep the grass from crowding it out. It should receive a liberal application of well-rotted manure. Some authorities contend that salt is a good fertilizer to be applied at this season, but that is an open question and its use is not advised if there is any other fertilizer, known to be good, available.

Age is not all decay; it is the ripening, the swelling of the fresh life within that withers and bursts the husk.—G. Macdonald.

Wealth is not his that has it, but his that enjoys it.—Franklin.



Photograph showing four platforms on a spring wagon containing a big load of peaches on its way to market.

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How Blossoms are Fertilized

PROF. J. E. HEWITT, B.S.A., Guelph, Ont.,
in Canadian Horticulturist

The production of millions of dollars worth of fruit depends largely upon insect pollination, and no insect is so important in this work, according to A. A. Phillips, of the Bureau of Entomology, Wash., as the honey bee. It is a most conservative estimate to claim that the honey bee does more good to agriculture in its office as a cross pollinator than it does as a honey gatherer.

What is there to support this statement? The indirect evidence we see in abundance in the numerous and wonderful adaptations of flowers to prevent self-fertilization and to insure insect pollination. The direct evidence has been obtained by experiments carried on by the various experimental stations and is very conclusive.

Prof. Waite, of Washington, whose experiments were published in the Year Book of the United States Department of Agriculture, reports as follows:

"Out of 2,586 blossoms covered with gauze netting only three apples set fruit. Of these the Baldwin, Spitzenburg and Fameuse set some fruit. The Baldwin, which is often self-fertilized, gave four times better results when cross-pollinated. Cross-pollinated apples were larger, more highly colored and better supplied with seed."

Results With Pears

"The Anjou, Bartlett, Clapp's Favorite and Clairgeau were found to be completely self-sterile, while the Flemish Beauty, Seckle and Angouleme were found to be more or less self-fertile.

"Out of 153 blossoms covered of the Arkansas Lombard no fruit set, and out of 475 blossoms covered of the Wild Goose (Prunus Americana), no fruit set; out of 90 blossoms covered of the Japanese Plum Mearu no fruit set."

Prof. Waugh reports the following insects pollinating the plum: Honey bee, bumble bee, wasp and some short-tongued bees. Prof. Waugh confirmed Waite's work with the plum and draws the following conclusions from his experiments: The results indicate that the insect visits are of prime importance in the pollination of plums. Observation in the field shows that the common honey bees are nearly always the most active workers and the ones which by the character of their operations in the flower may be held chiefly responsible for distribution of pollen.

Mr. C. H. Hooper, in the Journal of the Royal Horticultural Society, March, 1912, reports that when insects were excluded from gooseberries and red and white currants, practically no fruit was formed; from cherries a single fruit set; from plums a few fruit set; from apples out of 63 varieties only one set and matured fruit, viz.: Irish Peach; and from raspberries, fruit set but results were not so good as with flowers exposed.

Red Clover

Darwin states that one hundred flower heads on plants protected by a net did not produce a single seed, while a hundred heads on plants growing outside, which were visited by bees, yielded 68 grains of seeds.

Darwin's experiments with white clover proved that cross-pollination is necessary. Twenty covered heads yielded a single aborted seed, while ten unprotected heads visited by bees yielded 220 seeds.

In Bulletin 157 of the Kansas Agricultural Experimental Station it is stated that extensive experiments have shown that seed production is almost entirely prevented when insects are excluded from the blossoms.

In conclusion it may be said that bees are absolutely indispensable for the production of fruit and clover seed. With cross-pollination apples are more vigorous and more resistant to disease.

Practically no insects work except bees when apples are in blossom. Some varieties of apples are self-fertile, but even these have more and better fruit when bees are present.

Ground Limestone for Sour Soils

F. H. HALL, Bulletin No. 400

Many New York soils need lime. On probably three-fourths of the cultivated area of the State, the lime content has become so much reduced that legumes, the better grasses, beets and many other crops fail or give poor yields where once they may have grown well, because the soil has become acid or because the crops no longer find the lime they actually require as plant food.

Success with these crops is fundamental to profitable agriculture; and if, by moderate expense, the soils outside the limestone belt can be made to produce good yields of these better crops, the level of the agriculture of the entire State will be notably raised.

Ground limestone can now be obtained very readily and very cheaply. New quarries have been opened in many places, dozens of grinding plants have been put in operation, the equipment has been simplified and improved, the output of limestone of excellent quality is very great, and the costs of production and distribution have been greatly reduced. Limestone ground fine enough for general use now costs only \$1.25 to \$3.00 a ton at the railroad stations of most farmers in the State.

Ground limestone has been thoroughly proved an efficient and economical aid to crop production by long continued experiments in Ohio, Illinois, Pennsylvania, New Jersey, Rhode Island and many other States; and data are rapidly accumulating to show the same favorable results in this State.

Already this form of lime has shown itself effective in aiding the establishment of alfalfa on the poor hill lands

of southern New York, as useful as much more expensive forms.

In Ohio, in twelve years of testing on many plots, moderate applications of limestone once in a crop rotation of five years, on soils only moderately acid, have given average net profits of \$15 an acre when used alone, and of from \$2 to \$5 more than this when used with phosphorus, with barnyard manure, with phosphorus and potassium, or with complete commercial fertilizers.

In New Jersey, the value of the increase in general farm crops in five years after a two-ton application of ground limestone was placed at \$25 an acre, and the value of the increase in vegetables at \$48.

Ground limestone is as efficient as burned lime, if ground moderately fine and used in quantity to give the same amount of calcium and magnesium per acre. Nine years of comparative trials at the Ohio Station, four at the Tennessee Station, eleven years at the Maryland Station and much other evidence both from this country and from abroad prove that the limestone gives at least as good and sometimes better results than its lime equivalent in other forms. Quicklime occasionally appears to injure land or crops through its caustic properties; but ground limestone, being chemically neutral, can never harm either soil or crop. It should be said here, though, that, like most other forms of lime, the ground stone may increase the virulence of potato scab.

Ground limestone is more convenient to handle than other forms of lime. When ground fine enough for farm use—so all the material from the grinder passes a 10-mesh sieve—the stone can be shipped and handled in bulk, without the expense for bagging necessary when finely ground freshly-burned lime, hydrated (slaked) lime or air-slaked lime is used. The ground limestone can be easily distributed, either by hand or by a lime-sower, without the unpleasant effects on skin and eyes that follow the handling of caustic lime.



Our artist in this drawing illustrates one method of keeping the boy on the farm, which is by keeping the boy well supplied with fresh fruit. You and I who were once farmers' boys remember how attractive were the fruit trees of the garden and orchard when we were children.

Effect of Fertilizers

The top soil of an acre of arable land to the depth of 8 inches is estimated to weigh about 1000 tons, so that a dressing of 5 cwt. of fertilizer to the acre is really the application of only about 9 ounces of fertilizer to a ton of soil, and the quantities of actual plant food, nitrogen, phosphate, and potash, seem infinitely small; and yet these minute quantities of available plant food exert a wonderful influence on the growth of the crop. When we apply a top dressing of 2 cwt. nitrate of soda per acre, we are putting in the soil only about one-half ounce of actual nitrogen to every 35,840 ounces of soil, and still the effect is great. It seems marvelous.—Mark Lane Express Agricultural Journal.

Early Walnut Planting

For many years prior to this the demand for walnuts in the United States has been growing more rapidly than the supply and the result has been an advance in prices which has stimulated planting, says the Walnut Book. The discovery some years ago that the varieties of walnuts brought to this country from France thrive in the Pacific Northwest and in Northern California also brought about a new era of planting. About twenty-five years ago Col. Henry E. Dosch, of Portland, called attention to the adaptability of the French varieties of walnuts to Oregon conditions and a considerable number of walnut trees were planted in Oregon and Washington. As these trees began to bear they attracted attention.

The liking for walnuts is not one which has to be developed but the fact is that some families use ten times as many pounds of walnuts in a year as other families which spend about the same amount for foods. There are housewives who find that walnuts can be used to add zest or relish to a great variety of edibles including pies, salads, cakes, confections, etc. There is a steadily growing tendency to increase the use of nuts as foods. Everybody wants the luxuries he can afford rather than the bare necessities for existence. There is little difference chemically in the food values of tallow and butter. We are steadily increasing our consumption of butter as food and decreasing our consumption of tallow. The walnut has for thousands of years been recognized as the choicest of the nuts. The walnut holds much the same relation to the peanut as butter does to tallow. After a person becomes habituated to the flavor of walnuts he will lose his appetite for peanuts.

Safety First on the Farm

Written for Green's Fruit Grower By
W. C. SMITH, Ind.

Someone has said that carelessness causes more sorrow, suffering, disaster and loss than all other causes combined and the fact that all of the larger industries have put so much stress on the idea of safety before all other considerations makes plain the fact that this phase of any proposition demands the closest attention. Of course the farm does not compare with more dangerous vocations and those industries especially where workmen come into contact with much machinery, yet a total of one hundred and thirty-five accidents, sixteen of which were fatal, were reported from the farms of one state in less than two years. These records were incomplete and there is no way to determine the vast number of minor accidents which were not reported but which might develop more serious complications.

The general use of the more complicated and powerful machinery on the farm is bound to increase accidents to a certain extent yet minor implements which are in use day after day contribute an amazing total. Falls are the most common source of accidents. There is hardly an issue of a country paper that goes to press without the record of some accident caused by a fall. It may be serious or it may not, but in the aggregate they amount to many fatalities. We have but little concern for an ordinary ladder and it is not at all placed in the list of dangerous implements but more than one hundred times as many accidents are caused by carelessness with a ladder than are caused by steam explosions on the farm.

Corn shredders, grain separators, gasoline engines, sawing outfits, feed grinders and other improved machinery have brought the average farm nearer and nearer to factory conditions. These things and many others have contributed their toll of accidents. However they are not dangerous machines if properly handled. With the possible exception of one or two machines that have come into general use on the farm the accidents with them can be directly traced to carelessness or improper management. Steam boilers will explode once in a great while when no known cause can be determined, and pulleys, chains, belts and other parts that revolve rapidly will break at times without anyone being directly at fault, but these accidents are not to be considered with the great number that are the direct result of carelessness. It is a peculiar fact that out of sixteen accidents, which came under my personal observation, eleven of them occurred to men who had had previous experience with the machine which they were operating and who were regarded as being capable of caring for them. They had simply become careless. Six of these accidents resulted in the loss of some limb or portion of it and two resulted in death. One of the fatalities was the result of ignorance coupled with carelessness and the victim was wholly out of his place in being in the vicinity of the moving machinery in which he was entrapped.

That is one of the follies of experimenting with things which someone else is paid to operate and of which you know nothing. If you have no knowledge of how to take care of yourself when working with machinery it is a good plan to let the fellow who does know do the work. The fellow who tries to assist in a breakdown of the grain separator or traction engine is in the way more often than he is needed, and while his motive is excellent he is endangering both himself and the skilled operator unless he has had previous experience.

A human life is more valuable than the gain of a few hours or the saving of a few dollars by trying to work hurriedly and thoughtlessly. One cannot work well at any task unless his mind is concentrated on that one thing for the time being. Ask any man who has met with one of the more ordinary accidents and he will tell you that he "didn't think," but it is the business of the man who works with his hands to think and to think quickly in many cases. Failure to think is no more or no less than carelessness with the average person. It is illustrated not only in accidents to persons but accidents to stock, in fires, and in a hundred and one different ways. Putting off things is another way of expressing carelessness. It pays in real, hard money to be careful and to make haste slowly. The rushed man is usually a man who breaks down easily. We say that he goes all to pieces when he does become ill and the reason is simply because he uses every ounce of his energy in jumping from one thing to another. When illness overtakes him he has no reserve—no surplus with which to offset it and there is no wonder that he goes all to pieces.

In the end there is no reason or excuse for many, many accidents except carelessness. Persons who operate farm machinery should insist upon every safety device possible even if at added expense. The whole safety first plan can well be given consideration on the farm and after every care has been taken accident insurance should be added. Then as a fitting co-partner with the safety first slogan, thoughtfulness is a valuable ally. "Think first" should go wherever "safety first" can be applied.

The best mulch for all plants in summer is that of fine dust. This is secured by frequent harrowings whenever the soil is in suitable condition for it. Mulching of leaves, short grass and the like is apt to cause roots to approach the surface, which is not desirable.—F. H. Sweet.

After summer flowering shrubs are out of bloom, give them a fair pruning back. Many of them, especially spiraeas, if so treated, flower again in the autumn, some of them as freely as in their first display.—F. H. Sweet.



The Old Oaken Bucket

"How dear to my heart are the scenes of my childhood
When fond recollection presents them to view!
The orchard, the meadow, the deep tangled wild wood
And every loved spot which my infancy knew,
The wide-spreading pond and the mill that stood by it,
The bridge and the rock where the cat-ract fell;
The cot of my father, the dairy house nigh it,
And e'en the rude bucket that hung in the well."

—Samuel Woodworth

Health in the Rural Districts

Those who dwell on farms should be the most healthy and happy of all mankind. In past years health records have shown that those who lived on farms were healthier than those living in cities, but of late years it has been discovered beyond doubt that dwellers of cities enjoy better health and are better protected from disease than those who live on farms. This is owing in part to the great discoveries made by medical investigators and experimenters, but perhaps more largely by the better supply of pure water in the cities which has been brought about during recent years.

The drinking water of many farms is impure, unfit for drinking, owing to contamination from barnyards and other sources surrounding the farm home. The farmer does not realize that though the well is separated from contaminating sources by several hundred feet, there may yet be danger that its waters are impure, containing germs of disease.

In former times the physician paid no attention to the teeth of invalids. Now about the first thing that he investigates is the teeth. It has been discovered that teeth which have every appearance of being sound and healthy are the source of poisoning through ulceration in the interior of the jaws, and that the removal of such teeth results in the return to health of the invalid.

While it would seem unreasonable to claim that the food of the farmer is less palatable, digestible or healthful than that of the city man, it must be conceded that the food of the city man is more varied, since he has better opportunities for securing fruits, vegetables and some other items of which the farmer is deprived for at least part of the season.

Perhaps you have noticed that Green's Fruit Grower has a department devoted to health on the farm. If you have not read this health page, I advise you to turn to it at once and to look for it in every succeeding issue of Green's Fruit Grower, for it is possible, or even very likely, that this health page may be worth more to your family many times than it costs you to subscribe for this publication.

Who Produces Apples at the Least Cost?

The question is often asked, Does the commercial orchardist make the most money per tree or per acre, or does the small orchardist having from one to four acres make the most money? My answer would be that in the past the small orchard has been the most profitable. In fact the small orchard in the hands of the ordinary farmer has in past years been almost like a gold mine, aiding the farmer greatly in meeting his taxes and other outgoes without much outlay. If the orchard happened to bear no crop during a certain year, this farmer's loss was hardly perceptible as he had not expended much on it, whereas if the orchard embracing 100 acres failed to bear a crop the loss to that orchardist would be very large. But there is seldom a year of entire failure to bear fruit in any orchard large or small. In most instances some of

the varieties produce fruit each season, one variety alternating with another.

As regards the future comparative profits of the large orchardist with the small orchardist or farmer, it is evident that the small orchardist must change his methods, for if he does not he may be left out of the race. In past years almost anything in the way of apples has been sold at prices that left a margin of profit, but in the years to come a higher grade of fruit will be demanded and this higher grade of fruit cannot be produced without more attention in the way of spraying and cultivating than in past years.

A similar question might be raised as regards the strawberry grower or the raspberry or blackberry grower. Who makes the most profit, the man who has a large plantation, or the man who has one-fourth of an acre, or he who has a small garden patch? There can be no doubt that the answer to this question must be that the man with the small garden patch is the man who makes the largest profit, for this man pays out nothing for picking, since his own children or other inmates of his home do the picking, and he is at no outlay for labor, since he has planted and cared for his little patch in odd hours morning and evening. The small grower does not even have to own a horse for delivering his berries, since he can sell them to his neighbors or to the villagers, many of whom call at his place and carry the berries away in their arms or wagons.

How few there are who realize what opportunities there are for the poor man who has simply a garden patch to make money by planting and caring for a little plantation of strawberries or other small fruit.

Why Not Make Apple Butter, a Cheap and Universal Food Product?

This is an age of the high cost of living. Anyone who can suggest articles of food which are healthy, nourishing, and which can be produced at low cost, is doing a great service to mankind.

In past years almost all farmers made and laid by for future use quantities of apple butter. Perhaps the present generation does not even know what apple butter is. Our correspondent in this issue explains what it is and how it is made. It is inexpensive, healthful and nourishing, and can be used in place of ordinary butter in the consumption of bread. While it has not the same constituents as butter, it is appetizing when used in the place of butter.

Here is a suggestion for the experiment stations and other teachers to experiment with apple butter and to make this product more widely known.

I am confident that in the near future in the United States, particularly where fruit growing is almost spontaneous, more advantage will be taken of the various fruits and their products in settling the question how to lessen the expense of living.

The Poor Apple Cellar is Responsible

Yesterday I heard two men discussing the home supply of apples. They were talking about the desirability and healthfulness of apples. One man said that he had bought a barrel of apples a year ago last fall but that half of them decayed, owing to the fact, that his cellar was heated by a furnace and could not be made cool enough for keeping apples even though the cellar were divided into compartments.

His companion said that he bought last fall a box of Jonathan apples grown in the west. These apples were of beautiful color and almost perfect specimens, but he did not enjoy these apples as well as he would have enjoyed a Northern Spy, a Banana, McIntosh Red, or even a good old-fashioned Greening grown in western New York. Probably this man was prejudiced in favor of apples grown near home.

I made my pastor a present of nearly a barrel of apples. In thanking me

he reported that a year ago last fall he bought a barrel of apples and placed them in his cellar, but owing to the heat of his furnace they did not keep. Many of them rotted, thus discouraging him from buying apples by the barrel.

Here is evidence that there are few consumers of apples who will buy the fruit by the barrel. The great mass of our people cannot afford to buy so large an amount at one time. Bear in mind that a large portion of the population of this country buy their coal by the bushel, paying excessively high prices for such small amounts owing to the fact that it is expensive delivering coal a mile or two away in small amounts.

All this goes to show that the small package of fruit is the salable package and the safe package for the buyer for home consumption. The ideal package for fruit is one with a handle attached so that the purchaser can carry the package home without difficulty.

We have not yet placed the fruit growing sales of this country in a favorable light before the consumers. We have not adapted practical measures or ideas. Sufficient thought or attention has not been given to this subject. Some of us have learned how to produce apples at small cost, but when it comes to selling, we are thinking about carloads or train loads and not of the fact that the average buyer does not want to purchase over a half bushel at any one time.

Does This Boy Promise Great Things?

Here is a bright boy. What shall we do with him? What are his prospects of marked success in the practical affairs of life.

These thoughts come to me on reading in the morning paper that the youngest student ever graduated from Genesee Wesleyan Seminary, Lima, N. Y., where the writer received his early education, was the winner of \$95.00 in prizes, one of which was given for the best student and another prize for the best oration. This lad who has achieved the above honors, winning almost everything offered, is only fifteen years old. His photograph represents him as almost childlike in expression, and yet he has a fine face and head. The subject of his prize oration was "Give the Boy a Chance." I did not hear this oration, therefore cannot pass judgment on it, but no one can doubt that the American boy will be given a chance. This lad commences his college course at the University of Rochester, N. Y., this fall.

The question arising in my mind is what are the chances of this lad for success in life as compared with his fellow students, or with others who show far less promise, or with farmer boys scattered all over this country who have had no such opportunities of securing an education or of having leisure for the pursuit of knowledge. Naturally we would assume that in the years to come this man would be at the head of some great educational institution, or would achieve fame as an orator and lawmaker, or a leader in some great industry.

My experience with men and with life leads me to look with suspicion upon prodigies, that is upon boys who mature early in life and who at school are at the head of their classes and win all honors easily. When I think of these prodigies I cannot resist thinking of the first apples that ripened in the orchard of the homestead farm where I was born. These early apples attracted much attention for they were rare. They were beautiful in color far beyond that of their companions, which were more subdued in tint and acid in taste owing to immaturity. But I discovered that the fruit which matured late was the best. It was of larger size, finer color and better quality.

But boys are not like apples and it is difficult to prophesy as to what they will accomplish. Many of the great men in literature, in art and the sciences, were dullards in school and the despair of their teachers. Many who were brilliant as scholars were failures in practical life. Then again many who were brilliant as students continued brilliant in after years and won honor after honor until the end of life.

Soil Preparation

It is scarcely possible to say too much in favor of thorough preparation of soil for any kind of farm crop, no matter whether it be grain, vegetables or fruit. The field best prepared is free of stumps, rocks and trees. There is nothing to prevent careful plowing, harrowing, rolling and

discing until the soil is in ideal condition for the plants or trees which are to occupy the place. Sometimes we are apt to forget that preparation must continue after the planting. I refer to the preparation of the soil for the early wants of the plants or trees growing in it. If the soil is allowed to get hard or lumpy the growth of the crop is delayed. No one knows so well as the nurseryman that in order to get a thrifty growth of plants, vines or trees the growth must be continuous from earliest spring to the close of the growing season in August. If the soil is not continuously prepared for the growth, if cultivation is not given regularly and sufficiently and the growth is halted, it is seldom that vigorous growth can be secured later in the season on those particular items.

The Red House

What color shall we paint the farm house? Your answer will be "Almost any color but red." My answer would be "Almost any color but white." Artists have wonderful knowledge of colors. I have never yet known an artist to introduce a white house into a painting, but I have known eminent artists who have introduced red barns with good effect, the paintings being called "The Red Barn," one by E. W. Redfield, most famous American artist, and one by one of the Harrison brothers. Surely there are many tints and tones of red and the artists do not use any but a modest tone in their paintings.

The house in which I was born on the homestead, where I spent the early years of my life, was originally red. The red paint had been painted over with white, indicating that in early days there were only two colors thought of for farm buildings and those were red and white. Red paint is the most enduring of any, at least the building will show up red far longer than white paint on a house will make it show up white, thus economy was probably uppermost with our forefathers in painting their houses and barns that color. One of our neighbors had an old house painted red. The color being weatherbeaten fitted in well with other features of the landscape. But it is not my intention to recommend red houses or barns.

If you go into a paint store you will have no trouble in getting a card of many colors of paints. By consulting your wife you should have no difficulty in selecting a suitable tint for the body of your dwelling, which should be lighter than the tint of paint for the trimmings, the window casings, etc. In driving through the city or the village you can select colors from buildings there that please you, since there is no reason why, if the colors are attractive in town, they should not be attractive on the farm. The color of the barns and other out-buildings should be somewhat in harmony with the color of the house, indicating that they are all more or less closely allied.

Plums Coming and Going

The plum is an interesting fruit, highly prized by the housewife, but not so popular as in past years. About twenty years ago great interest was taken in Japan plums. The nurseryman who did not have at least one new variety of Japan plum to offer in his catalog was considered behind the times. These Japan plums were of great interest. They were different in leaf and growth from the plums formerly grown and were marvelously productive. Some of them ripened their fruit at a very early date, as, for instance, the Red June. Nearly all were beautiful and of peculiar shape. Some of them bore fruit so abundantly the trees were liable to break down with the burden of fruit. These Japanese plums were not equal in quality to the European plum, which is the class of plums most popular before the introduction of these Japan plums, but were superior to the native American plum of which the Wild Goose is a type. The European plums, such as German prune, York State, Niagara, Bradshaw and Shropshire Damson, are of high quality and on the average larger than the Japan plums or the native American plums. It looks as though these good old favorites would long continue in favor with plum growers.

At the first of the year, according to a Government estimate, there were 198,677,000 farm animals in the United States, a gain in a year of about 7,992,000.

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How to Grow Blackberries

Cultivation should begin as soon as the plants are set, and repeated every ten days or two weeks up to Sept. 1st, says the Practical Farmer. The culture must necessarily be shallow, as the roots lie close to the surface. Many growers cease cultivation during the blossoming period but resume as soon as the fruit is set. Good cultivation to conserve moisture is very necessary during the ripening period.

The blackberry is a heavy feeder and the ground must be kept well provided with plant food; stable manure is probably the best fertilizer. It can be applied at the rate of 20 tons per acre. If manure is not available they may be fertilized with about 600 pounds per acre of a commercial fertilizer running about 4% ammonia, 6% phosphoric acid and 8% potash. If heavy dressings of stable manure make too great a cane growth and increase the leaf area at the expense of fruit, it should be supplemented by acid phosphate and potash to balance the food ration.

Suckers must be kept down to certain limits or the plantation will soon become an unmanageable thicket. Suckers do not reappear as rapidly if they are pulled by hand. Larger and better berries will be obtained if the suckers are kept down. As soon as the crop is harvested the old canes that have just fruited may be cut and burned. In regions subject to heavy snowfall they are sometimes left until spring to aid the young canes in carrying the snows. However, where such support is needed trellises are preferred. In pruning out the plantation it is best not to leave more than three or four canes to each plant. The extra young canes may be cut out at the same time the old are removed. The new canes should be pinched back during the summer when they reach the height of about 2 feet to 30 inches. As all the new canes do not reach this height at the same time, it will be necessary to go over the plantation several times during the season. In a few varieties it will be found advisable to spring prune the laterals back to 18 to 24 inches. Some varieties form their first buds out on the tip of the laterals and in such cases heading back the laterals would seriously decrease the crop for the next season. Early Harvest and Erie are examples of varieties that should not have their laterals cut back, while Early Cluster will stand close pruning.

The system of training will vary with the climate and the variety. The most common method is to use a wire trellis. Posts are planted every 15 to 30 feet and a single

wire stretched along the posts; the canes are tied to this wire at a height of 2 to 2½ feet. A variation of this trellis is to nail 18-inch cross arms to the posts and stretch two parallel wires and nail them to the cross arms. The canes are then kept between the wires and little, if any, tying is necessary. With trailing varieties a double set of parallel wires may be used, the bearing canes being tied to the upper wire and the new canes to the lower, alternating each year. If hill culture is practiced posts or stakes may be set at each hill and the canes tied to them.

Some gardeners where they have plenty of straw, prefer to mulch instead of cultivating. Such a method gives good results and helps keep down weeds and suckers, and keep the ground moist and cool; many think they can obtain a better grade of berry by mulching.

In picking, the character of each variety must be learned, in order to harvest it at the right time. Some will stand picking before they are wholly black, while others will not. The berries should always be set in the shade after picking. Let the fruit set in the quart cups for a few hours before marketing; this will allow time for insects, that may have fallen in while picking, to crawl out and escape. Always keep in a cool place.

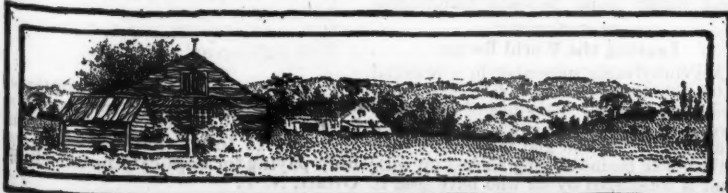
A plantation seldom proves profitable for more than five to ten years, although exceptions are often found. Keeping up the humus content of the soil will add to the life of the plantation.

If markets are good the blackberry should net \$100 per acre.

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of
Green's Fruit Grower

IF you find a renewal blank between its pages it means that your subscription should be renewed at once. Fill in and mail the blank as soon as you find it, so that you will be sure to get every copy of the paper.



Selecting Fruit for Fair Purposes

The man who is intending to exhibit horticultural products at one or more fairs this fall should now be preparing his specimens for this purpose. No matter what kind of fruit or garden vegetables one is working with, it can usually be made just a little better than the average run of the crop, if slight attention is given to the same. This attention may consist of a few extra cultivations, more careful thinning away of crowding specimens, staking up, partial shade, or pinching back twigs or pinching off leaves to enable more light, etc. Many details which make the specimens more perfect will readily suggest themselves to one preparing specimens.

Random Epigrams

Lots of people expect something for nothing. Many a fellow who travels on his uppers wants a lower berth.

Friendship is essential to happiness. Even the man who is his own best friend can't get along very well without a few others.

The man who has no imagination never falls in love.

Even the egotist may have the wool pulled over his I's.

Many a man wastes his time telling other people not to waste theirs.

Silver and gold don't rhyme, but they make a pleasant jingle.

Magnifying glasses are part of the equipment of reformers in their search for vice.

A woman has no sense of humor, which may explain why she sometimes takes a man seriously.

The vials of wrath are frequently poured out in family jars.

Quantity doesn't always count. A little charity to the living is worth a wagonload of flowers to the dead.

—New York Times

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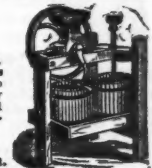
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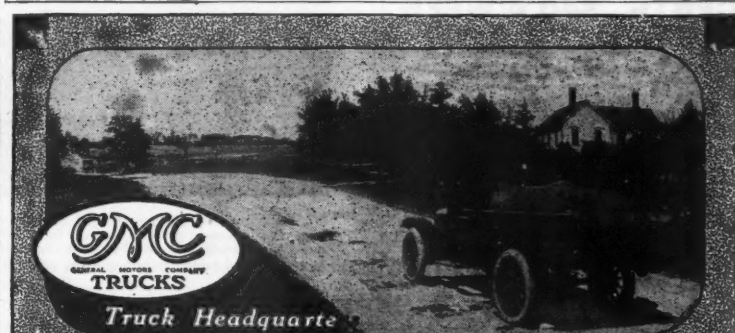
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Farm Department

Save Stable Manure

The farmer who has the requisite number of live stock can use feedstuffs grown upon his farm or purchased to supply those elements of plant food needed by the soil to maintain its fertility; and by following such a practice consistently he can overcome to a large extent the necessity of extensive purchase and application of commercial fertilizers, says U. S. News Letter.

The liquid portions of the manure contain about three-fourths of the nitrogen and nearly all of the potash voided by the animal. Therefore, it is highly important that as much of the liquid manure be saved as possible. This is usually accomplished by using a sufficient amount of bedding to absorb it, or by allowing it to drain into a pit or cistern of some sort. Spreading manure while fresh is generally most economical. Where this is impracticable, it should be stored under cover or in a concrete pit, and always kept well packed. "Fire-fanging" can be prevented by keeping it quite moist. Those desiring further information relative to the care and use of manures should correspond with the department or their State experiment station.

Aside from the fertilizing elements contained in manure, it has beneficial mechani-

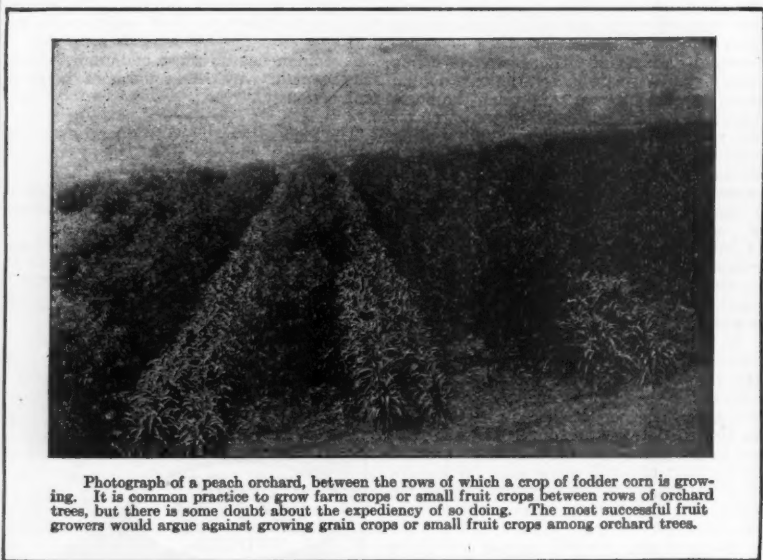
tion in 1910, according to the Department of Agriculture, was \$8,498,311,413. The entire production of that year would not even pay increase in land values for the six years since then, to say nothing of the inflated prices that prevailed during the census year. And it requires as much expenditure of labor and capital to make the land productive, as it did in 1910. Is it any wonder that farm tenantry is increasing?

Productivity and Value

In the year 1910 there were in New York State 14,844,039 acres of improved farm lands out of a total agricultural area of 22,030,367 acres. According to the United States census the value of this land, aside from buildings, averaged a little over \$32 an acre. The total value of crops raised in New York that year was \$209,000,000, so that the average \$32 acre produced a \$15 crop.

In the same year, according to the census, there were in Illinois 28,048,323 improved farm acres out of a total agricultural acreage of 32,522,937. The average value of an acre of this land, aside from buildings, was \$96. Yet it only produced a crop valued at \$372,000,000, or but \$13.28 an acre.

In other words, the farmer who paid \$32



Photograph of a peach orchard, between the rows of which a crop of fodder corn is growing. It is common practice to grow farm crops or small fruit crops between rows of orchard trees, but there is some doubt about the expediency of so doing. The most successful fruit growers would argue against growing grain crops or small fruit crops among orchard trees.

cal effects upon practically all soils. When properly applied, manure improves the physical condition of the soil by increasing its water-holding capacity, aeration, and temperature. While the soluble portion of the manure is at once available for plant use, other plant foods are released as decomposition continues for two or more years. This latter process assists materially in rendering available for plant use the potash and phosphoric acid which are already present in the soil, but in unavailable forms.

When the farmers of our country thoroughly appreciate the actual amounts of fertilizing constituents which are contained in farm manures, and intelligently care for and utilize the manure produced on their farms, they can save millions of dollars in fertilizer purchases; and the necessity of depending upon the purchase of these fertilizers, followed by the occurrences of crises in the fertilizer situation such as now exists in some sections, will be largely decreased.

Unearned Increment Measured in Crops

The average value of farm land throughout the United States in 1910, aside from buildings, was \$32.49 an acre, according to the census. In 1916, according to the Department of Agriculture, this value had grown to \$45.50, an increase of 40 per cent. Since the total value of farm lands, aside from buildings, was returned in 1910 as \$28,475,000,000, the total increment since then must be more than eleven billions. The total agricultural wealth produc-

tion for an acre of New York land in 1910 got \$15 for his crop, while the one who paid \$96 for Illinois land only got \$13.28 for his. Someone got stung. It was the man who bought Illinois land to use, or rented it on a \$96 an acre basis.

The comparatively high productivity of New York farms has been attributed to more intensive cultivation in that State. That may partly explain the difference. But another reason is that owners of Illinois lands were more interested in boosting values than in raising crops. Unearned increment was coming in fast, so why waste muscle and gray matter in raising food for the people, when wealth can be had without work?

The result is that in agricultural Illinois the proportion of farms worked by tenants has increased, and working farmers owning their farms have decreased. And the end is not yet. The Department of Agriculture reports a continuing upward tendency in values. That means an increasing toll that the worker must pay to monopoly. These increased values are increased national liabilities, which, if not checked, must finally cause national bankruptcy.

Leaving the World Better

A Pennsylvania subscriber in a personal letter puts the proposition of life and living well when he says: "My line of farming is diversified. We keep cows, hogs, sheep, and poultry, and now and then raise a colt,—the whole business being backed up with what is considered by all who have seen it

as the best apple orchard in Tioga county, N. Y., says Correspondent of Hoard's Dairyman clipped for us by C. C. Thompson. This orchard I planted and 'grew up' so that when the time comes for me to cross the river I can say that I left the world better than I found it."

It seems to us that this man, who has had but six months of schooling in the regular established schools, has sounded the philosophy of life and has acquired the greatest and best kind of an education. He evidently knows his business of farming, takes pride in his accomplishment, and realizes the debt he owes to posterity. Would that we could all lay down our work at its completion and say that by our living we had left the world a better place in which to live.

Again, the development of the man illustrates well the value of meeting a task with fortitude and good cheer instead of avoiding it. Our friend was not content to sit down and bewail his lack of education; he went to his work with a purpose of developing a better life. He "grew up" his orchard. Is there a better expression or can the words of the most polished educator convey the meaning any better? It takes knowledge, it takes labor, it takes love of work and life to grow up an orchard. We see life and sentiment in "grew up," and we honor the man.

Just how was this farm philosopher able to grow up an orchard and how was he able to educate himself? He did it much as Lincoln did; much as many of our greatest thinkers and statesmen have developed themselves and thus made of themselves agents for improvement. He says: "What little knowledge I have gained by the way, I have acquired by practical experience and by reading farm papers." In other words, he has been a student all his life. As we read between the lines and visualize the personality of the friend we have never seen, we believe we understand in a measure how reading has opened up the vistas of life and better farming, how practical experience has enabled him to winnow the wheat from the chaff, and how it has broadened his vision, and lastly how the personality of the man, that large and undefinable factor in life, has joined with the other two in making him a philosopher of life, a man who would leave the world better and brighter.

Road Lands and Road Fences

The needless fences in the United States cost the people over \$2,000,000, says The Rochester Evening Times. The plan I advocate would do away with the larger share of this amount. Fences are required solely to keep stock from eating the crops. Would it not be fairer for the man with stock to fence his stock in and keep it away from the man's crops who has little stock than to have them both fence to guard against this? The law should read that the man with stock should inclose his stock and be responsible if his stock should destroy his neighbor's crops. At present our laws make a farmer fence to keep his neighbor's stock out. Yet we have laws making it a misdemeanor to trespass on another man's property. Why do we not have laws the same concerning the "other man's property"?

France has no fences, and there are no more frugal, thrifty agriculturists in the world than in France. Congress and state legislatures are spending much time on agricultural bills and now let them turn their attention to one of real importance.

"Hullo!"

When you see a man in woe,
Walk right up and say "Hullo!"
Say "Hullo" or "How d'y'e do!"
"How's the world a-usin' you?"
Slap the fellow on the back,
Bring yer han' down with a whack;
Walk right up, and don't go slow,
Grin an' shake an' say "Hullo!"

Is he clothed in rags? O sho!
Walk right up and say "Hullo!"
Rags is but a cotton roll,
Jest for wrappin' up a soul;
An' a soul is worth a howdy,
Hale an' hearty "How d'y'e do!"
Walk right up an' say "Hullo!"

I want to say I have discontinued taking all other fruit magazines as I have found your paper covers the entire field so fully, that I found I was only paying for duplicate notes.—E. W. Oviatt, N. Y.

Pro Mr. Chas. give explicit currants. I ploma curr them accord I buried the with two inc they were d tried it with anxious to kn they be laid Should the e should the h ground? T be taken? T bushes now, the wood is su Indiana.

Reply: F bunches show and it were b each. There bundles so th The bed or enough so th shed with sa with the sun preferable to should be hig be taken off September o have fallen, cuttings sho 9 inches at the bushes. sun usually c which are up times to mak But the v absolutely n currant, whic ing up aroun earth, sandy will cause ro part of the be cut off an cuttings can being taken cutting set so the tip is see ing heavily vent heaving

Mr. Chas. berry patch w I set out the quite well this of runners. transplant th cut off all ru to your paper through the judgment wo

Reply: U many plants to give the be but I believe perhaps all y stand with th Strawberry p to form with pathway betw to walk in. and more fru only a narrow further runne where the pla matted rows to do their b this is the w produced. In tation and tra taking up a f the new bed.

Trees I have pu fruit garden to do with t old, set up n the soil is ver to immense si of peaches on has gone to li now—or wait like them to Telford, N. Y.

Reply: Yo anxiety of ma

Letters From The People

"Prudent questioning is the half of knowledge."—Proverb

Propagating Currants

Mr. Chas. A. Green: Will you kindly give explicit directions for propagating currants. I have some Red Cross and Diploma currants and have tried to propagate them according to directions in your book. I buried them in dirt, butts up, covered with two inches of earth, but in the spring they were dry and dead. A neighbor also tried it with the same results, and we are anxious to know wherein we failed. Should they be laid in a trench or stood upright? Should the earth be two inches over all, or should the butts be allowed above the ground? At what time should the cuttings be taken? The leaves are about all off the bushes now, but we have had so much rain the wood is surely pretty soft.—W. T. Webb, Indiana.

Reply: For burial during winter the bunches should not contain over 50 cuttings, and it were better if in bundles of 25 cuttings each. There should be room between the bundles so that the sand will be kept moist. The bed or trench should be dug deep enough so that when the cuttings are covered with sand the tops will be on a level with the surrounding soil. Sandy soil is preferable to other soils. The location should be high and dry. The cuttings should be taken off from the bushes in August or September or any time after the leaves have fallen, the sooner the better. The cuttings should be cut into lengths of 8 or 9 inches at once after being removed from the bushes. The warmth of the autumn sun usually causes the butts of the cuttings, which are uppermost, to callous and sometimes to make roots.

But the work mentioned above is not absolutely necessary in propagating the currant, which may be propagated by banking up around an old bush or any bush with earth, sandy soil preferable, in June, which will cause roots to be formed on the lower part of the branches. These layers can be cut off and planted in October. Other cuttings can be planted immediately on being taken from the parent bush, each cutting set so deeply in a trench that simply the tip is seen above the ground, then covering heavily with straw or manure to prevent heaving during winter.

Mr. Chas. A. Green: I have a strawberry patch which I let bear the first season. I set out the plants in the fall. They bore quite well this season and have an abundance of runners. Do you think it advisable to transplant these new plants or would you cut off all runners? As I am a subscriber to your paper, I would be pleased to learn through the columns of same what your judgment would be.—Nicholas Didas, N. Y.

Reply: Undoubtedly there are far too many plants in your rows of strawberries to give the best results in fruit next season, but I believe you will get much fruit and perhaps all you expect as the rows now stand with the plants crowded in the rows. Strawberry plantations often are allowed to form with matted rows with simply a pathway between the rows for the pickers to walk in. But larger fruit, better fruit and more fruit can be secured by allowing only a narrow row to form, cutting off all further runners. You can readily see that where the plants are allowed to form thick matted rows the plants cannot be expected to do their best in yielding fruit, and yet this is the way that most strawberries are produced. Instead of digging up this plantation and transplanting it, I would suggest taking up a few plants for the planting of the new bed.

Trees Growing Too Fast

I have purchased fruit trees for our small fruit garden and would like to know what to do with two peach trees, three years old, set up near an asparagus bed, where the soil is very rich—the trees have grown to immense size. They have about a peck of peaches on each this year. The growth has gone to limbs—Should they be pruned now—or wait until spring. We would like them to bear well next year.—H. M. Telford, N. Y.

Reply: Your letter indicates the great anxiety of many people about their trees.

Many amateur fruit growers seem to think that they must be doing something to their trees, plants and vines every minute in order to keep them in prosperous condition, while the fact is that growing these useful things is one of the easiest things in the world. The trees will grow while you are sleeping and while you are attending to other duties of life. The main thing is to get the trees planted in the right place and in the right manner. After this the trees will grow and bear fruit for the home supply without any attention whatever. But on the other hand, what can be done to your plants, vines and trees to assist them in becoming fruitful and long-lived is marvelous.

Pruning is an art. Pruning will change a tree from the largest size to the smallest size. Pruning trees will make them fruitful if done properly, or unfruitful if not done properly. Feeding the roots of trees and keeping the surface cultivated will act like a miracle in changing the habit, character and growth of the plant, vine or tree.

I think you have nothing to worry about. Your trees are alive and are bearing fruit. Trees that grow rapidly are not usually so fruitful at an early age as trees that grow slowly. I advise the cutting back of more than half of the new growth of all peach trees each year. This means that next April you cut off the larger portion of this year's growth from every branch of your peach trees. This is also desirable for pear trees, and may be under certain circumstances desirable for all fruit trees.

Apricots and Nectarines

Reply to Sidney McDonald, Ind: An apricot on my place is bearing fruit every year though there is no other apricot tree in that locality. But all fruits are inclined to be more productive if other trees of the same kind are near by. Apricots are more uncertain of bearing fruit than peach trees and are more often injured by the late spring frosts. I do not consider apricots or nectarines very profitable as an orchard crop in New York state. They are a profitable crop on the Pacific Coast. Insects bother nectarines more than peaches.

I do not advise fall planting for the apricot. Fall is the best time to plant currants and gooseberries, raspberries, blackberries and all hardy fruits.

Sowing Rye with Buckwheat

A subscriber of Green's Fruit Grower asks whether it is desirable and profitable to sow rye with buckwheat, when the buckwheat is sown as late as possible, simply as a cover crop.

Reply: The sowing of rye with buckwheat is admissible only when the buckwheat is sown late, too late for it to mature its crop, as occurs when buckwheat is sown simply for soil improvement. When the buckwheat is sown late, I advise sowing with it at the same time rye. When the frost destroys the buckwheat, the rye will continue to cover the soil during winter. Where there are no birds or fowls to pick up the rye, it may be sown in the buckwheat as it stands, September 1st or 10th, but the chances are that the seed of the rye will be consumed by the birds or fowls, which almost makes sowing rye on the surface of the soil impracticable.

New York Land for Growing Apples

Green's Fruit Grower: A few ex-farmers here and myself, of Scandinavian descent, are interested in New York farm lands that will grow good apples and other fruit. In what part of the state do they raise the best apples? In what part of the state is the best place for a working man of moderate means to invest his money to get returns? In what counties do they raise the best apples? In what other counties could they raise fair to good apples? What is the average price of fruit land? In what part of the state could a man get good land at a reasonable price for stock raising? My friends and I have some money we would like to invest if we can find something that will be a safe investment.—Otis Stimes, Ill.

Reply: There is no better apple growing section in this state or possibly in this country than along the southern shore of Lake

Ontario, continuing from twelve to twenty miles inland from the lake, the nearer the lake the better. Such lands are in Niagara, Monroe and Wayne counties, N. Y. Lands nearer the lake are held for higher prices than land twenty miles distant. Land that will bear good apples can be bought at about \$100 per acre. If the land is planted to apples and the trees are bearing crops of fruit, you could not expect to buy such orchard land for less than \$500 per acre.

Land suitable for stock raising can be secured in Chautauqua and Chemung counties and various other parts of the state at from \$20 to \$50 per acre, according to circumstances.

Orchard Information Wanted

Desires: Position in the field of scientific horticulture, dealing with the culture of fruits, that offers and in fact guarantees opportunities for the gaining of a thorough knowledge of, and a thorough training in, orchard technique and management, and which might provide also, advancement to an ambitious man.

Education and Experience: Elementary school; 3 years commercial training; 6 years experience and training in the business and expert practice of tree surgery, covering in part, work such as the rejuvenation of old and neglected apple orchards, (holding position as foreman five of the six years); Winter Course 1913-14 in horticulture at Pennsylvania State College. Age: 25 years.

Questions

1. What, in your judgment, as the result of experience, do you consider are desirable and essential qualifications necessary for the realization of the foregoing outlined desires?

2. To what extent is a college course in horticulture deemed advisable; that is to say, is a college education absolutely necessary in order to realize a decent and respectful station or attainment in horticultural work?

3. What would the limitations be, in the field of horticulture as outlined, to which a non-college man is subjected?

4. As far as you know, what does the future hold for one who enters the horticultural professions or vocations, and what are the opportunities for securing such position as in connection with the preceding outlined desire?

5. What, in your opinion, are other elements that ought to be considered before arriving at a conclusion and decision in the selection of such a work?

6. Are positions in horticultural work likely to be of a seasonable or of a permanent character?

7. Do you know if any such positions as desired are open or where they are to be obtained?

Questions Answered By C. A. Green

1. I cannot answer all of your questions on a basis of my personal experience, owing to the fact that my personal experience

has been most largely with such information as could be picked up by fifty years of farm life and over thirty-five years' personal experience with fruit growing outside of any college course. I would regard as essentials to success a natural taste or desire for fruit growing and those qualifications, such as industry, persistence and thoroughness, which are necessary in order to succeed in any other enterprise.

2. I do not doubt that a college course in horticulture would be helpful, but I have no personal experience with college courses. No, a college education is not absolutely necessary.

3. I do not think there would be any limitations such as you suggest either with or without the college course. Almost everything would depend upon the man, his ability and his fitness for the occupation. Some men without a college education would far outstrip the man who has had a thorough college course.

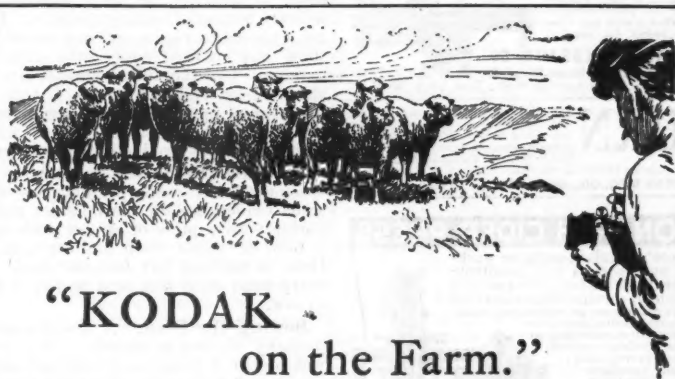
4. The future holds out great inducements for men who are capable of successful management of orchards, vineyards and berry fields, but such successful management does not depend entirely upon accumulating information, or entirely of ability to grow the finest fruits, but will depend somewhat upon the business sagacity of the individual in handling large business affairs. I mean by this that a professor able to teach horticulture and able to succeed in planting, spraying and caring for the orchard or fruit tract, whatever it might be, might make a colossal failure of handling a commercial orchard, owing to his lack of business ability or business training in early years. Consider the business ability necessary to harvest, to pack, sell and ship and turn into money the product of 100 or more acres devoted to fruit growing. Many men who have had college courses and some experience outside of the college course, would be incompetent to send to a distant city for the purpose of securing 500 foreigners to pick fruit, and incapable of providing for such an army of helpers with shelter and food, and meanwhile keep them good natured and hard at work.

5. My answer to this question is the same as the answer to No. 4.

6. If a large orchardist or a large orchard company succeeded in finding a man who was capable of managing an orchard successfully and of handling the fruits successfully, he would not be likely to change the tried official for one who had not been tried.

7. I am not in position to give information on this subject. If I were looking for a position of this kind I should advertise in the leading fruit growing publications, stating my qualifications and experience.

Green's Fruit Grower: I take this occasion to compliment you on your excellent publication. I read every number from cover to cover and find that it contains more common sense and practical farm and orchard information than any similar publication that I have ever read. All of the publications are placed on file and are referred to frequently.—W. F. Girard, Mo.



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Notes from Green's Fruit Farm

(By E. H. Burson)

The Weather. As I write July 7th the weather is all that could be desired, warm, sun shining and a good breeze stirring which is good for the haying which has fairly commenced. So far this has been the wettest season experienced for many years. Weeds have had their way and above all the pesky yellow dock has flourished as never before. The workmen have many times become half soaked if not full soaked coming or going to work, and more often in their runs for shelter after work commenced. Electric storms were frequent and one severe hail storm did considerable damage to small fruits on the southern part of the farm. One large raspberry field and an apple orchard a quarter mile distant lost 95 per cent of their foliage and there is not an apple left on the trees. Fortunately we escaped the heaviest part of the storm.

Transplanted stock revelled in the rainy weather and all is looking fine today. The cultivating boys have had to do their work over and over again seemingly, for on a partially fine day everything that could possibly be reached would have to be cultivated, and often just as finished a heavy thunderstorm would beat the soil down harder than before.

The Strawberry Crop. Generally speaking the strawberry crop was a fair one.

The pickers are busy today in the Brandywine and Corsican fields. Strawberries love a rich soil and lots of water and the daily rains seem to have suited them.

Not enough. As usual many families will go short of strawberries next winter for there were not near enough to fill orders. During the past 24 hours we have received a score of orders that could not be filled.

The Crop is reported as having been a very heavy one in some parts of the state and that prices run very low. Hereabouts the crop was below the average if anything and prices ruled good. As with the peach crop last year, when the crop was a heavy one and rushed into an already glutted market, prices were so low as to barely cover labor of picking and packing, whereas a few miles away families went hungry for the fruit. A telephone and a Motor truck (or a Ford automobile) are factors that help in the distribution of fruits amazingly.

A good late variety is much needed. Something as good as Brandywine but later. Seemingly so many put off their strawberry canning until after the 4th.

Seedling Strawberries. Today I have sown a quantity of seed secured from selected berries of leading varieties. I may get a thousand plants and not one of them show any marked superiority over their parents. On the other hand there is a chance. Several years ago I had good success and one of the seedlings secured is being planted extensively and is without doubt the most productive variety grown.

Securing the Seed. Select large good specimens, with a sharp knife pare off the seeds (which are on the outside) put this paring with a piece of cheese cloth and in a bowl of water wash and squeeze until there is nothing left but the seed. Mix sharp sand with this seed and it is ready to sow.

Sowing the Seed. A fine loamy spot partially shaded is chosen. The soil is well prepared, being made very fine and the seed mixed with the sand is sown broadcast and lightly raked in, a covering of half of an inch of sand is scattered over the plot, watered and results awaited. If all goes well the young plants will be seen pricking through in two weeks time.

The Raspberries look promising indeed. Plum Farmer, Cumberland and Kansas blacks; Cuthbert and Herbert reds, with

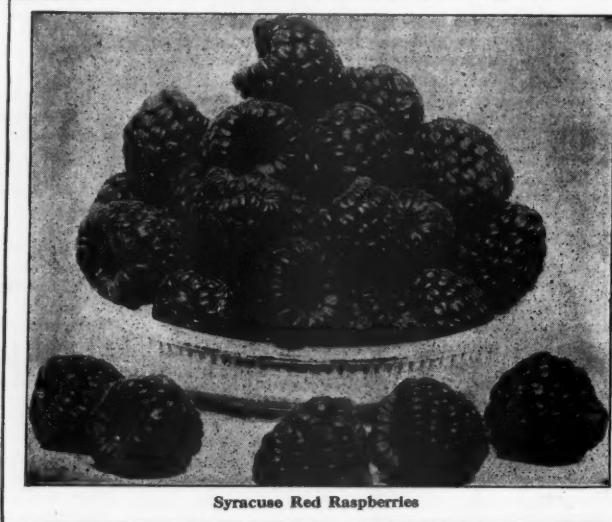
Columbean purple are our favorites. Scarff (the improved Gregg) also promise a good yield.

Roses. This has been the season of all seasons for blooms. Dwarf, baby and hybrid perpetuals never showed such a wealth before and the ramblers and the Live Forever are a sight now. If you have a hedge of the Live Forever you are I expect especially delighted. We have about a mile of this rose in hedgerow. The bushes are from two to ten years old and have never been sprayed or winter protected.

Flowering Shrubs are now being planted by the hundred where one was planted a few years ago. The barberries, deutzias, spiraeas, snowballs and weigelas are especially desirable, are hardy, cheap and ready for immediate effect when put out.

The Deutzias by the bye are not planted as much as the desirability of the bush warrants. It is now in full bloom and the branches covered with pure white, pink tinted, or bright rosy blossoms makes it one of the very best of the hardy shrubs.

The Catalpas and Altheas start to put out leaves in the spring much later than many other trees and shrubs. In the case of newly set specimens I have known them not to show a leaf until July 1st or later.



Syracuse Red Raspberries

Some planters do not know this and more than one has complained to the nurseryman who furnished the stock that "the catalpas and altheas were dead evidently as they had been set out two weeks." Last year several tree altheas started to grow in August and made good growth before winter.

Buckwheat. We are now sowing about 50 acres as a soiling crop. We realize that there are other soiling crops that are richer in plant food, but buckwheat is gotten in easily, and if the season is at all favorable produces a big bulk to turn under, which is perhaps not equalled as a soil loosener. When the crop is in full bloom it is put under with the plow, the land rolled and worked on top, and it rots quickly. We sow one bushel to the acre broadcast. The Japanese variety is the kind we sow as it grows considerably larger than the silverskin.

Cherries. This is an off year with us. On account of the continued cold rains at the blooming time and hail storms later the crop is not worth harvesting, and although cherry money comes handy to help pay labor bills we are not sorry as there seems to be other important work crowding us. In any case we have nothing much to complain of for without fail our Cherry crop, both sweet and sour, has been a bumper one for the past six seasons.

Good Roads Increase the Value of Farms

In past years the man who lived 12 to 15 miles from the city has felt himself cut off from association with the city and with the many benefits of city life. Now through the agency of good roads such distant farm-

ers feel that they are really a part of the city, for they can run their motor cars into the city 12 or 15 miles away in less than an hour. At Green's Fruit Farm we have a motor truck which enables our farm to make three or four journeys to the city where formerly they made one. The saving of horse flesh is great. It is a serious thing to take a plow team and hitch it to a wagon and drive it to the city 12 miles distant, but where you have an auto truck it never gets weary and the strength of the driver is saved also by making the journey speedily.

In Rochester, N. Y., where Green's Fruit Farm is located there are many lawyers, bankers and many other classes of citizens who live on farms 12 to 15 miles distant and who are not inconvenienced by coming into town daily, since they can do so in 30 or 50 minutes. In this way they can enjoy rural life and run their farms with profit and delight and still attend to their business affairs in the city. But in order to do this they must have an improved road, for otherwise they would be cut off from communications with the city during or after heavy storms, causing rutted or impassable roads.

It is plainly to be seen that farm lands have advanced in price during the last ten years. Good roads are not entirely responsible for this advance in price of farm property. Undoubtedly higher prices for farm produce have helped also.

A Cloudburst

I had not known much about cloudbursts until during a trip to West Virginia when I was shown a wash-out on the mountain side which I was told was caused by a cloudburst. Even then I did not realize what a cloudburst really was. I assumed that a cloudburst was an actual deluge poured from the clouds as one would pour water from a tub, but this was erroneous. A cloudburst means a monstrous, marvelous fall of water, the fall being in the usual manner only of greater volume.

We had at Green's Fruit Farm this spring more cloudbursts than ever before that I can recall. Even the high lands were too wet to be plowed or cultivated. Lower lands

that were prepared for planting to trees, vines and plants were flooded with several feet of water. Not far distant from Green's farms there was a gully farm so filled with gravel from an adjacent slope the farm was destroyed, having no soil on which plants can grow for many years to come. No storm or cloudburst has been so severe as this during 100 years. This has been shown by the fact that 100 years ago two mill buildings were situated on this slope and were carried away by the flood, the mill stones being swept so far and buried so deep with gravel they have never since been seen.

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WATCH

Your September Number
of
Green's Fruit Grower

If it contains a renewal blank, it means that your subscription has expired and should be renewed at once. Use the blank at once when you receive the paper and avoid missing any copies.

Picking and Packing Peaches

Within a few weeks fruit growers will be busy with the peach crop. It might be well, therefore, to briefly summarize a few of the factors that go to make success in picking and packing this fruit, says A. J. Logsdail, B.S.A., Canadian Horticulturist.

The longer a peach is allowed to remain on the tree till fully ripe, the better will it be in quality, but it must be picked sufficiently firm to allow it to carry without injury to such distant markets as eastern Ontario and the middle western provinces.

In picking peaches it should not be necessary to press the fruit to determine whether it is sufficiently ripe to pick. The appearance of the different varieties varies considerably, and only experience can teach one to quickly determine with the eye the fruit that is ready to pick from that which is nearly but not quite fit. A large proportion of the help available in the fruit growing districts is inexperienced and necessarily slow, but it will pay any grower to carefully teach the pickers how to pick, and save himself continual worry throughout the season, by receiving at the packing shed a large percentage of "finger-bruised" and "nail-cut" fruit that would otherwise have been perfect.

A peach should be picked, not with the points of the fingers and thumb pressed into it, but with the palm of the hand and the full length of the fingers around the fruit, thereby distributing what pressure there may be necessary over the whole peach, without producing finger bruises or nail cuts.

The eleven quart basket is the most popular size of package, each basket holding about fifteen pounds of fruit. Three layers of fruit in a basket of this size constitute a fair sample of first-class fruit. "Extra fine" and "Fancy" peaches are often packed two layers deep in what are called "Nine Quart" and "Six Quart" baskets, the former holding about twelve pounds of fruit, and the latter about eight. The "Nine Quart" is the same length and breadth as the "eleven," but shallower.

How to Arrange

Fruit should be packed firmly and arranged so that they are slightly (though very slightly) above the level of the basket; they should be firm, but never squeezed into place. A basket too tightly packed is as serious a fault as one too loosely, though the latter is the commonest fault to be found in the handling of this crop.

A number of the fruit growers in the vicinity of Niagara ship by boat to Toronto, and they have devised what is known as the Leno-basket. The "Eleven Quart" basket is used for this purpose, the fruit being heaped well above the level of the basket, and instead of the usual basket lid, a leno covering is used. This is sewn to the top rim of the basket. The advantages

claimed for these packages are: that they ship in better condition because they cannot be piled one above the other, but have to be placed upon shelves; that they sell more readily, the fruit being more attractive when packed in this manner, and that they bring a higher price on the market. The disadvantages are just those factors that are claimed as advantages: they cannot be piled one above the other, therefore they can only be carried where room will permit the use of shelves; where space is at a premium, as is often the case in fruit and express cars, the leno basket is at a great disadvantage; the higher price secured is very largely offset by the added amount of freight; and the leno covering is not as quickly put on as the basket cover. The use of this pack, therefore, is directly controlled by facilities of transportation, and even then can conveniently be used only on a limited scale.

A packing shed is a most necessary adjunct to a good orchard, and should be placed as near as possible to it. Four posts and a roof will answer the purpose, which is that of affording shade and cool air to the fruit as it is brought in from the orchard to be graded and packed. A portable shed, with sautters for windows, by which means ample ventilation can be secured, and provided with sloping packing benches, is a great asset in handling the fruit quickly and thoroughly during the rush of peach packing. All baskets full of fruit should be carried to the shed immediately, and there placed in the shade.

Small Baskets

Several growers prefer using the small six quart basket for picking the fruit in the orchard, as there is less chance of bruising the fruit; the small baskets are more convenient when picking, and the fruit is more easily handled when brought to the shed for packing. It is a mistake, and one that is made by many, to think that a basket of peaches can be picked and packed at the same time. One man in ten might be able to do it, but for the other nine it is most necessary to see that the baskets are rearranged and packed before the covers are fastened on, and the grade of fruit marked on them.

New Organization Seeks to Equalize Apple Distribution

Several of the biggest apple growers in the Central West met at the Planters Hotel yesterday and formed the National Commercial Apple Growers' Association, which will seek to eliminate flooded apple markets, thereby making the product cheaper for the consumer and the business more lucrative for the grower, says The St. Louis Republic.

In past seasons the apple market in some sections has been so glutted that producers have thrown away thousands of barrels, while other markets have not had enough.

The purpose is to equalize the distribution. This is the first association of its kind ever organized, and the movement promises to become national in a few months. Those at the meeting represented a production of 350,000 barrels last year. Every apple grower is asked to join.

Among those at the meeting were: Prof. H. C. Irish, president of the Missouri State Horticultural Society; William Perrine, president of the Illinois State Horticultural Society; H. M. Dunlap, Savoy, Ill.; R. A. Simpson, Vincennes, Ind.; F. H. Simpson, Flora, Ill.; Col. J. M. Tanner, Flora, Ill.; P. C. Stark, head of the Stark Bros. Nurseries, Louisiana, Mo. and W. S. Forgey, president of the Federal Fruit and Cold Storage Company of New Orleans, La., and St. Louis.

The association will hold first annual convention in St. Louis, August 2 and 3. Dunlap was made temporary chairman; Prof. Irish, secretary; Stark, chairman of the Membership Committee and Forgey, chairman of the Arrangements Committee.

Along the Road

I walked a mile with Pleasure.

She chattered all the way.

But left me none the wiser

For all she had to say.

I walked a mile with Sorrow,

And ne'er a word said she

But, oh, the things I learned from her

When Sorrow walked with me!

—Robert Browning Hamilton

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Sorting peaches in orchards near Rochester, N. Y. The sorting of all kinds of fruit is important, or vital I might say. Small or inferior fruit packed with the larger fruit is worse than thrown away, for it injures the appearance and salability of the entire lot both good and bad. This fact cannot be too firmly impressed upon the minds of fruit growers. Peaches must be handled very gently in sorting and packing so as not to bruise the fruit.

Woman's Dept.

The Kitchen Sink

Written for Green's Fruit Grower By
F. H. Sweet, Va.

If the cook is not particularly careful about keeping all the meat drippings and other grease from getting into the kitchen sink the drain pipe will occasionally become clogged.

The first thing to do when this happens is to open up the screw-plug of the trap. This will be found at the bottom of the U-shaped bend in the pipe just under the sink. Do not neglect the precaution of placing an old bucket under this plug before opening it, for all the water that is backed up in the sink will flow out. If this rush of water does not come when the plug is removed the pipe is, of course, stopped up in its first downward length. This obstruction, of cold, thick grease probably, must be cleared out with a stiff wire. Clean out also as much of the upward bend of the U as the wire will reach. Upon closing the trap plug again, the water will, in all probability, flow freely through the drain. Allow the hot water to run for a time to clean out the grease still more thoroughly.

If, however, the water again backs up in the sink the obstruction lies further along in the pipe. Once more unscrew the trap plug to get rid of the backed-up water. Then replace the plug and pour into the sink a cold solution of copperas that has been dissolved in boiling water, one pound to the gallon. If this does not eat through the obstruction, allow the sink to fill up for three or four inches with water. Then take a board, say eight inches square, lay it on the surface of the water directly over the drain pipe, from which the strainer has, if possible, been removed. Take a short piece of broomstick, and, holding one end on the board just over the pipe opening, strike it a quick, sharp blow on the other end. If the blow is quick enough the water will not splash over the side of the sink, but the force will be transmitted through the water itself to the obstruction. If this device, too, fails, we shall have to call in a plumber.

A WARNING TO MOTHERS Don't Let the Children Handle Dead Flies

To instruct children to "swat flies" and accumulate them until they have enough to bring in and collect 10c. a hundred seems nothing short of a crime against modern sanitation. It would be a dangerous practice for grown people who took every possible precaution against infection; but for children to carry dead flies with their hands and then perhaps handle food without washing is almost certain to spread every disease that flies are known to carry.

The only possible way, from a sanitary standpoint in which flies could be caught and preserved for the estimating of their number would be on a sheet of sticky fly paper which embalms the flies' bodies with a glue which prevents germs from spreading. This might add to the difficulty of estimating the exact number but it would be near enough for all practical purposes. And it would protect children from probable infection in the very diseases against which the fly campaign is supposed to protect them and would teach them to regard the fly as the deadly insect he is instead of encouraging them to regard him as an object of familiarity and indifference.

Consumption of Sugar

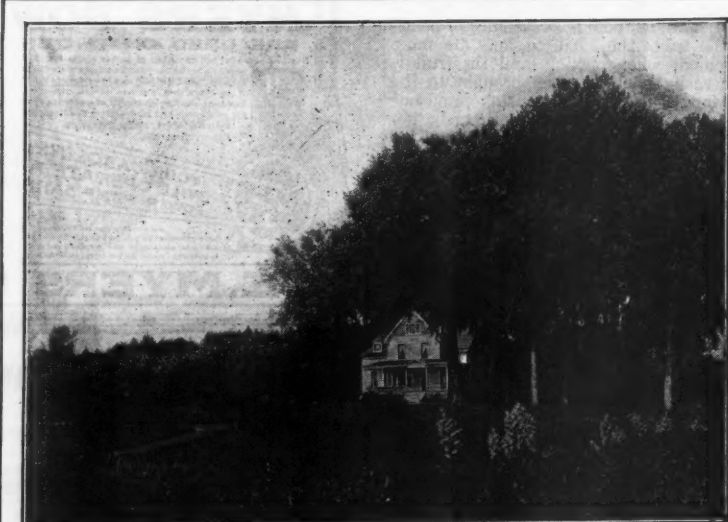
The consumption of sugar per capita in the United States is estimated to be more than ten times what it was a hundred years ago. During the past five years the consumption has averaged about 83 pounds per capita. A hundred years ago the consumption of sugar varied widely. It was usually between 4 and 10 pounds a year. Great Britain consumed 92 pounds per capita, more than the United States in 1911, but France and Germany used far less, the per capita consumption being 39 and 42 pounds, respectively.

Sugar present in fruit has a remarkable effect on nutrition and can be eaten in far

greater quantities than raw or commercial sugar. The latter eaten too freely—and a small quantity is often sufficient—will cause irritation, acidity, pain and the various freaks of digestion. When, however, sugar is employed in the manufacture of jam these phenomena are fewer or they disappear altogether. The cause is worth knowing, for the wise man will avoid what may cause his distress.

Jam which has been well boiled, like that made by the economical housewife, contains a large proportion of "invert" sugar, which is more freely digested than raw sugar and can be eaten with greater impunity.

The most nutritious and useful of all varieties of jam are those made from the plum, a mixture of plum and apple, the damson, the apricot, the gooseberry, the currant and the whortleberry, which is rich in iron of special value to the nervy and the anaemic. The plum and the apple likewise stand at the top of the list, but in all cases the skins and acids, like the malic acid of the apple, play an important role in the economy of health.



An Attractive Country Home

Did You Know

That a hot iron held to the head of a rusty screw will make its removal less difficult if the screwdriver is applied forthwith?

That a nail should be dropped in hot water for a few minutes before it is driven into plaster, to prevent cracking of the plaster?

That the easiest way to pull out a staple is to slip a nail through it, then catch the claw part of the hammer under the nail?

That to screw a hook into hardwood you should first make a hole with a small gimlet, then slip the handle of a knife or any small steel article through the hook and turn until secure in the wood?

That small brass rings which can be bought at the notion counter may be sewed on the inside of the small boy's trousers to serve as hangers and save wear on the buttonholes?

Things to Forget

The mean things others have said about you.

The injury any person has done you. The mistakes you have made in the past, except as they may warn you in future. The kindnesses you have tried to do others. The days when you were better off than you are now.

The promises other people have made to you.

The ill-natured gossip you have heard concerning others.

The secrets entrusted to your confidence. The worry that hinders your happiness. The drawbacks that seem to stand in the way of your success.—"Evening Bulletin."

Buttonholes that Last

"If well made, a buttonhole should wear as long as the garment," says Miss Addie D. Root of the Missouri College of Agriculture. "There is no excuse for the buttonhole that soon breaks through at the end and leaves a slit twice as great as the diameter of the button."

To make a good buttonhole, begin the slit about a quarter of an inch in from the edge. Cut on a thread through both or all thicknesses of the cloth, making the slit the length of the diameter of the button to be used. Use a thread a little heavier than the cloth in which the buttonhole is worked and of sufficient length to complete it. The needle should be as fine as will carry the thread.

In working a buttonhole, first put in two or more stitches across the lower end of the slit to keep it from stretching. Then take two or more stitches down the side, across the end and up the other side, a sixteenth of an inch from the edge, bringing the needle out at the starting point. This will strengthen the buttonhole. In overcasting the edges, sink the stitch a thread beyond this stranding. Four or five overcasting stitches on each side are sufficient to prevent raveling and to keep the strands in place. The last

mass that it is hard to heat through, and because it is more difficult to kill the micro-organisms which cause it to spoil.

To can corn, boil it in salted water, just as if you were going to serve it, from 10 to 15 minutes. Cut it from the cob and pack it in quart jars. Add enough boiling water to completely cover and a rounding teaspoon of salt to each quart. Put on the covers of the jars loosely and place the jars on a rack of some kind in a boiler. Put in enough clean water to completely cover and boil four hours, counting from the time when the water commences to boil. When the time is up, remove the jars from the water and tighten the lids while the jars are still hot. This is more easily done with a spring seal than with a screw neck jar.

GOOD RECIPES

Currant and Pineapple Marmalade

Cook the currants and press through a coarse sieve to remove the seeds, then turn into a porcelain kettle, and add chopped pineapple and sugar. I use one pint of currants and a pound of pineapple and a pound of sugar to a pound of the mixed fruits. Cook slowly till a rich conserve is formed, and pour into small jam pots.

Fresh Currant Sauce

This sauce is excellent for cottage pudding or steamed pudding. To make it, crush a pint of currants with a spoon, add a half pint of sugar and serve hot.

Blackberry Corn Cake

2 cups Indian meal; 1 cup flour; 3 tablespoonfuls sugar; 2 eggs; 1 teaspoonful salt; 1 teaspoonful of soda.

Dissolve in a pint of sour milk, or if the milk is sweet use two teaspoonfuls of cream of tartar. To be filled with berries and baked till a nice brown.

New England Huckleberry Biscuit

Pick over and wash a quart of berries and flour well. Butter a dripping pan well. Sift together one quart of flour, two teaspoonfuls of baking powder and a teaspoonful of salt. Cut a quarter of a pound of butter into bits and rub into the flour in rather large flakes. Then put in the berries and stir in quickly enough milk to form a soft dough. Drop the dough on buttered pan from a tablespoon wet in cold milk, and place the biscuit in the oven. Bake from fifteen to twenty-five minutes, until they are done. Serve hot with plenty of butter. Sour cream may be used instead of milk and butter, using soda to correct the acidity of the cream and also the two teaspoonfuls of baking powder.

Peach Shortcake

Make a rich baking powder biscuit dough, split open while hot, butter and fill with ripe peaches sliced thin and sweetened. Serve with thin sweetened cream flavored with nutmeg.

Peach Whip

Peel enough peaches to give a generous cupful of peach pulp. Turn over these pieces a small cupful of powdered sugar and let stand until a thick syrup is formed. Then press the fruit through a sieve until a smooth puree is obtained. Whip a pint of cream and when this is stiff pour it over the peach puree. Place in glasses and garnish with a sprinkling of shredded cocoanut and one or two candied cherries. Or grate over the top finely crumbled macaroons. This is a very rich dessert and should be served with a sponge or angel cake.

Peach Leche Cream

Pare and slice twelve peaches, put them in a baking dish and sprinkle with a half cup powdered sugar. Scald a pint of milk; add one tablespoonful butter, two tablespoonfuls of cornstarch wet with a little cold milk and add a pinch of salt. When the mixture begins to thicken remove from the fire and let cool; then stir in the beaten yolks of



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three eggs and pour over the peaches. Bake in a quick oven for ten minutes then spread with a meringue made of the beaten whites of the eggs and three or four tablespoonfuls of powdered sugar. Set in the oven to brown lightly and set the meringue. Then serve ice cold.

Hay Fever

Put a heaping teaspoonful of bicarbonate of soda in a tumbler of warm water. Fill the palm of the hand with the liquid and snuff it well up the nose and down the throat. Do it several times, and repeat it during the day. Keep it up for a week or more, and the hay fever will be gone. That has been my experience and it won't cost much to try it. Hay fever is an irritation of the membrane lining the nose. It is caused by several things. Some people have it in rose blooming time; some at strawberry time; some who are not affected by scent of roses are bothered in August by ragweed or goldenrod. The pollen from various things irritate the nerves in the nose, and a thin, colorless fluid is discharged. This is an acid, and it causes the inside of the nose to be supersensitive. The nerves running to the eyes becoming infected would cause itching and swelling. Nerves running back to the throat, down to the bronchial tubes carry the inflammation, and a case of asthma results. Now a substance to counteract an acid is an alkali. Bicarbonate of soda is an alkali, and if snuffed

up the nose when mucus is running will counteract the effect of the acid, will dry the membrane and soothe the nerves. No itching eyes, no sneezing, no asthma, no bronchitis, because the nerves that cause these things are soothed. Acid irritates them; alkali kills the acid.

Pets for Profit

Written for
Green's Fruit
Grower By
Adeline
Klose, Mis-
souri.

Now truly said,
don't you feel
sorry for a child,
city (or country)
who is raised
without pets of
its own? I do!
A pet, whether
dog, bird, horse
or rabbit, that
lets you know
he loves you by
his mute way of
showing it, don't
you think your-
self well paid
when you watch
him? I do! I
would rather
have my little
city yard bare
of flowers, with
only a thorny
rosebush and a
few trees, than
see my children
miss this
pleasure, pro-
vided children
are kind to them
and will give
them the care
they need.

Never will I forget some years back when my boys wanted a goat — and what boy does not? With the help of a neighbor's child, who simply had no room to keep even a bird, they started out one

morning to find the goal of their ambition, and I hoping the other way, for while very fond of animals I had my doubts about goats in our neighborhood.

Around three o'clock, seven hours after they started out, I near a collapse from weary waiting, fearing something had gone wrong with them, I heard a commotion in front, and there was a sight worth seeing. First my oldest boy, then a lad of twelve, pulling with all his power, an animal which they told me was a nannie, its beard, sides and tail so full of cockleburs that little else showed, and the neighbor's son pushing with all his might, trying to get our lady goat to come inside of our yard. An audience of a dozen boys stood by giving advice and assisting.

I figured that while we owned our own home and no landlord could make us move, our neighbors could make it quite unpleasant for having such a nuisance around, still when she looked up with her eyes so tired and weary from the two mile tramp, I had not the heart to send them away with their treasure, and after a good cry, I simply went to work to help them clean her up. We had lots of pleasure when six weeks later we found three of the cutest kids you ever saw in the stable with her. But my back yard, mercy, not a blade of grass escaped them. Instead of the lawn mower we used a broom, and still, while other mothers looked for their boy, and found them not until they turned up at meal time,

mine and many others were in my own yard watching our goat family. Do you think it was worth it? I do! I would advise to turn their fancy to petting less troublesome than goats. Rabbits are cute, we all know about dogs and cats, but cavies or guinea pigs are not so well-known and still they make the best, the cleanest, and yet most profitable pet of all. When one afternoon, while we were out, our goat family lunched from my front hedges, I simply had to order change in pets, and so a pair of guinea pigs were the next to arrive, and from this small beginning in two years time my boy won 14 first, 2 second, 2 third and one special premium, sold about \$40 worth, and has a stock of 50 on hand.

There are three kinds of cavy, the Peruvians with hair several inches long, the Abyssinians with the hair in rosettes and English or short haired, which is the best and most profitable of all cavy, as doctors and hospitals buy them in dozen lots at 50c to \$1.00 apiece. A good doe will have young every ten weeks and from 4 to 6 in a litter. In summer lawn cuttings will keep them very nicely with a little oats now



Pet Animals on the Farm

Mr. G. W. McMillan of California sends us the above photographs of his daughter Georgia, aged 12 years, and her pet goats, which appear in the top photograph, and her pet baby donkey in the middle photograph, and her pet pony in the lower photograph. Mr. McMillan suggests that much might be done in the way of making rural life attractive to children and to others if they could be permitted to have a pet in the way they may desire. My special interest is who is there no matter how old, who cannot recall with pleasure the pets of the farm during his childhood days. Sometimes a pet dog or cat will suffice, but a other children a donkey or goat or a pony, a calf or a pet lamb would be far preferable. By making pets of animals one may learn better than in any other way the intelligent ones are. You would be surprised to learn how intelligent your chickens are, or your barrow, or your dog, your horse, your cow. You would also be surprised how affectionate these pets are. They will form an attachment for you. They will desire your company and will look for you and call for you and thus add much to the pleasure of living. The memory of all the animals I have named, and of others is phenomenal. My special memory is from my childhood I have given names to and whenever I appear near them they are nosing around for an apple, and the same is true of cows, dogs and cats.

and then. In winter of course they need hay, etc. The little ones are easy to raise, take little room and are as affectionate as any cat or rabbit. I gave up my chickens and assist the boys now, as both are at work and attending night high school besides. Any one interested should get from the Department of Agriculture, Washington, D. C., Farmers Bulletin on guinea pigs. Its free for the asking.

Keeping Boys and Girls on the Farm

The average city dweller in buying a house for a home does not proceed solely on the basis of what he can expect to secure in case it is ever desirable to place the house on the market. He is not likely to consider the purchase of a home as a financial investment, but as a social one, which will enable him to secure for his family the comforts and conveniences that he could not secure in a rented house, and to have for his family a genuine home, a genuine home life. If he is able when the time arrives to dispose of his property to financial advantage, well and good; if not, he considers, and properly so, that he has made a good investment from the social side.

There is no panacea that will cure the yearning for city life evidenced by the country boys and girls of today, but there are certain conditions which if established will add materially to the attractiveness of life in the country, and should therefore prevent them from flocking to the cities merely to avoid life on the farm. It is not to be expected that every person reared on a farm will desire to follow farming as a life work, nor is it necessarily desirable that they should do so. Many of the boys will feel a calling to one or another of the professions, and it is probable that if allowed to follow their bent, they will be far more successful and contented than if over-persuaded to stay with the farm. The problem is not to force the boy or girl to remain on the farm, but to assist them in every way in making an intelligent choice. Their choice can not possibly be intelligent unless they are familiar with farm life under its best conditions.

—E. B. McCormick, U. S. Department of Agriculture.

Your Best Help in Washing Clothes

**Don't Rub—Don't Fade Your
Clothes—Don't Ruin Your Hands—
Use 20 Mule Team Borax on washday.**

Borax should be used in the proportion of one part borax to three parts soap. Soap alone, no matter how good it is, will not produce the cleansing results that soap and borax together will produce. It softens the water, removes dirt, germs and odors, whitens the clothing, brightens colors and prevents woollens from shrinking.

**Use 20 Mule Team
Borax and your washing
will be sweet-smelling
and fresh.**

Add Borax to the starch -- it makes the ironing smoother.

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HAIR BALSAM
A toilet preparation of merit.
Helps to eradicate dandruff.
For Restoring Color and
Beauty to Gray or Faded Hair.
50c. and \$1.00 at Druggists.

90 VAR'S All breeds Poultry, Eggs, Forrets, Dogs, Pigeons, Hares, etc. List free. Colored Dues 60 page book 10c. J. A. Bergey, Box 7, Telford, Pa.

Plants, Strawberries and Vegetables
All vegetables and strawberries including everbearing. Get my catalog. Read why I sell choice plants so cheap at half the price of others. C. E. FIELD, Sewell, N. J.

PIGEONS PAY
Better Than Chickens
Young pigeons (squabs) bring 40 to 50c each when 3 to 4 weeks old. Big demand in city markets. Each pair of pigeons easily cleared \$4 per year. Always money needed to start. Free Book explains all. MAJESTIC BROS. CO., Dept. 18, Adel, Iowa.

FREE BOOK

Win Against the Hessian Fly

TO Win Against the Fly, seed late, feed the crop with available fertilizers which will hasten growth to overcome the late start, and secure vigor with consequent resistance to later broods. Use 200 to 400 pounds per acre containing at least 2 per cent of ammonia. Acid phosphate alone does not give the necessary quick growth and resistance to the fly.

In Farmers' Bulletin No. 640, U. S. Department of Agriculture, fertilizers are recommended to give vigor to late sown crops and resistance to the Hessian Fly.

Write for our map showing best dates for sowing wheat in your locality; also our Bulletin, "WHEAT PRODUCTION," both mailed free.

Soil Improvement Committee
of the
National Fertilizer Ass'n.
Chicago Dept. 151 Baltimore

\$275 MOTORCYCLE GIVEN

Can you find the hidden words in the circle? Try it. The words form the name of a well known farm magazine. Send in your answer with your name and address at once and you will be considered in the awarding of the \$275.00 Harley Davidson Motorcycle and 16 other Grand Prizes we will give away on October 31, 1916. Answer today and we will give you 1000 votes toward the \$275.00 Motorcycle. In case of a tie duplicate prizes awarded. Whether you win Motorcycle or not if you take part in contest you get a Valuable Prize and Cash Reward. Send Puzzle Solution NOW.
FARM LIFE, Dept. GCS, Spencer, Ind.

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Write for this valuable reference book; also prices and samples of fac-simile letters.
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Poultry Dept.

About Raising Broiler Chickens

Written for Green's Fruit Grower By
F. H. Sweet, Va.

Almost every one has at some time had an attack of "chicken fever" and has become convinced that there is a sure fortune in raising poultry. The many failures and few inspiring successes of others has no effect on his conviction. The only known cure for chicken fever is to try to raise poultry and become immune. In its most violent form it tends toward broiler raising, because that is the branch of poultry culture that, on paper, gives the greatest assurance of quick fortune.

Experience will soon teach an enthusiast that broiler raising is a special field of effort in poultry work—in which more risk is involved and in which more failures occur than in any other branch. A thorough practical knowledge, and the ability to apply it, are absolutely essentials for success. Growing broilers calls for plenty of hard work—both mental and physical—and the income derived is in direct proportion to practical knowledge, its application, and strict attention to business on the part of the grower.

When I first embarked in the poultry business, my preliminary figures showed that I was going to make something like \$750 profit above all expenses, the first year, on an investment of \$500 in buildings.

As a matter of fact I made no profit at all the first year; indeed, I scarcely managed to keep even with the expenses; and this, too, in view of the fact that I had some previous experience with poultry, having been raising chickens in a small way for two or three years. I soon found, however, that raising a few chickens on a back lot for home consumption is one thing, and that making poultry raising an exclusive business is quite another. This last limited experience was valuable, however, and I am pretty sure my broiler venture would have been added to the already long list of poultry failures without it. There was no doubt about this; the evidence was overwhelming.

In spite of discouragement at first, I have finally achieved a measure of success by raising so called "squab broilers" capons and roasters.

Squab broilers are quickly grown chickens that dress from ten to eighteen ounces, according to the requirements of the market. They are used chiefly by the high-class hotels and restaurants and are termed "individual birds." There is a large and growing demand for this class of birds, and the supply has never exceeded the demand, nor is it likely to.

The difference in cost of producing a one and a two pound chicken is relatively small, since the greatest cost always comes in producing the first pound of meat. The second pound of weight can be put on in four or five weeks, and, since broilers are sold by the pound, it looks reasonable that the second pound of growth comes easiest, and would be, therefore, the most profitable. In spite of this, I preferred to sell my product at the first fair profit; because the squab broilers could be marketed some four weeks earlier than "standard" broilers, and, consequently, the houses were emptied (ready to be filled again) sooner.

Birds intended for squab broilers are hatched out from November to March, inclusive; they bring, as a rule, the best prices from the first of February till the end of April.

Standard sized broilers are in demand from February to September; but I have nearly always obtained the best prices from the latter part of March to the middle of May. In our best city markets, prices of broilers weighing from one and a quarter to two pounds, range from twenty-five to fifty or sixty cents a pound, the price being governed, of course, by the demand and the supply available. We have found that the one and a half-pound chicken is the most popular size during the first month or two of the season, though at times during

this period and all the time during the remainder of the season, the two-pound size is in greatest demand.

It might be well for me to say right here that we can't grow a two-pound broiler in eight or nine weeks, as some men do on paper. It takes us about nine weeks to grow a one and a half-pound bird, and eleven weeks to grow a two pounder. Even at that, however, I am able to make a fair profit on my birds.

I have never seen the cost of producing a broiler publicly given at more than twenty-five cents, and have seen it stated that a two-pound bird could be grown at a cost of twenty cents; but where a sum lower than twenty-five cents is given as the average cost for the year, I will frankly admit my inability to compete. There are, of course, times in the year at which broilers can be produced at a cost of about twenty cents each; but this is during the summer when the birds can secure a large portion of their food by foraging, and when they bring correspondingly low prices in the markets.

(Concluded in September)

Eggs Valuable Food

It is rather interesting and amusing to note the delicate gradations of the list of trade descriptions of eggs: New-laid eggs, specials, strictly fresh, guaranteed fresh, fancy eggs, good boilers, good cookers, guaranteed local fresh, good fryers, ranch eggs, eastern eggs, good eggs, tested eggs, cold-storage eggs, held eggs and imported eggs, says Rochester Herald. An egg is full of original sin from the moment it is laid and asks only a little leisure in a warm place to indulge in all its proclivities for wickedness. Every minute that it is exposed to more than 68 degrees Fahrenheit means progress in its downward career.

"A knowledgeable housewife has for several years preserved eggs perfectly by immersing them in her frying kettle of hot fat for a longer or a shorter time, according to the freshness of the egg or the use for which it is destined. The fat should only be hot enough to brown a bit of bread in two minutes. Perfectly fresh eggs she places in the frying basket and immerses for just eight seconds. These can be used practically the same as fresh eggs, for only an imperceptible film of white adheres to the shell.

"Eggs that are fresh, but not quite new-laid, she lets stand in the kettle for one or one and one-half minutes. These are destined to be heated up for soft-cooked eggs.

"Eggs that are good, but have been laid for more than five or six days, she cooks in the fat for five minutes. These are used for salads, garnishing, chopped in a white sauce, stuffed and devilled, or for any purpose for which hard-cooked eggs are generally used.

"The eggs are drained on absorbent paper, wrapped in tissue paper and will keep indefinitely, for not only is the shell sterilized, and the entrance of more germs prevented by the slight coating of grease, but the possibility of the egg drying out or toughening from evaporation is avoided.

"The advantage claimed over other methods of preservation is that the flavor of the egg is in no slightest degree altered to the most delicate palate the egg seems as fresh as when it was put away, and they can be kept for a longer period in this condition than by any other method she has tried, and she has made many experiments. Once, as a matter of curiosity, she kept a dozen of eggs for 18 months, when they were pronounced by some guests to be the freshest and sweetest preserved eggs they had ever tasted."

THRESHER PROTECTION

Three Measures for Prevention of Dust Explosions and Fires in Grain Separators

As a result of a study of explosions in threshing machines, the department now

recommends that one or more of three measures be adopted to prevent loss from this cause. These are: (1) The installation of an efficient grounding system for the removal of static electricity from the machines; (2) the installation of a suction fan to remove smut and dust and to prevent the formation of an explosive mixture of dust and air while the threshing is being carried on; and (3) the installation of a device to act as an automatic fire extinguisher which in the event of fire will not only save the machine but prevent the flames from spreading to the surrounding grain.

The first two of these devices have been tried with successful results in the field. The automatic fire extinguisher was not constructed until the threshing season had been closed, but it has been tested under severe conditions in the explosion galleries of the Bureau of Mines at Pittsburgh, and in these tests it has operated successfully. It has also been tested under practical threshing conditions at the Government farm at Arlington and proved effective in extinguishing fires which were produced in different types of grain separators there.

For August and Fall Planting

Pot-grown and runner plants—STRAWBERRY PLANTS that will bear fruit next summer. Standard and Everbearing varieties. Also RASPBERRY, BLACKBERRY PLANTS, FRUIT TREES. Catalogue free. HARRY D. SQUIRES, Rome, N. Y.

Classified Advertisements

No display advertising will be placed in this department and no type larger than 6-point. The first three words only to be printed in capital letters. Each abbreviation and number will count as one word. Rate 10 cents per word for each insertion. No advertisement inserted for less than \$1 per issue. We cannot afford to do any bookkeeping at this rate. Cash must accompany every order. Orders must reach us not later than the 15th of the month previous to the month in which the advertisement is to appear.

Terms: CASH WITH ORDER.

Green's Fruit Grower Co., Rochester, N. Y.

HELP WANTED

THOUSANDS GOVERNMENT JOBS open to Men—Women. \$75.00 month. Steady work. Short hours. Common education sufficient. Write immediately for free list of positions now obtainable. Franklin Institute. Dept. N 147 R. Rochester, N. Y.

WANTED: Foreman who understands packing and picking of peaches. Good permanent position the year round. Give references, send photo. Apply Wilson E. Schmick, Hamburg, Pa.

THE WAY TO GET A GOVERNMENT JOB is through the Washington Civil Service School. We prepare you and you get a position or we guarantee to refund your money. Write to Earl Hopkins, President, Washington, D. C. for Book FK 1146 telling about 292,296 Government Positions with lifetime employment, short hours, sure pay, regular vacations.

FOR SALE

POWER SPRAYER at a bargain. Deming 3 H. P. tank, 150 gallons, horse drawn. Cost \$265 will sell \$135. C. H. Baker, 910 Longacre Bldg., N. Y. C.

GINSENG HALF PRICE, seeds, roots, 1-4 yrs. old. R. Klick, Westerville, Ohio.

2000 FERRETS. Prices and book free. N. Knapp, Rochester, O.

OVERCOME CONSTIPATION and headache and greatly lessen liability to appendicitis; natural safe home method. Full directions fifty cents. Postal Cards never answered. Regulator Co., Box 687, Milwaukee, Wisconsin.

ORCHARDS OR GARDEN TRACTS FOR SALE

WILL SELL ALL or part of garden tract, seven miles from Denver, Colo.; bearing plum and cherry orchard; strawberries, other small fruits; 3-4 mile to shipping station; grade school within mile; 100, twenty or thirty acres; old water right (1868 priority) insures ample water for irrigation; fine arroyo well; substantial house, cellar and porches; good barn for five horses, fifteen cows; fifty-foot chicken house; price \$12,500; about one-fourth down, balance long time, low interest. Dr. W. H. D., 660 Metropolitan Bldg., Denver, Colo.

FARMS FOR SALE

GOOD FARMS in nearly every desirable section of New York State. Tell us what kind of farm you want and how much cash you can pay and we will send you a carefully prepared list of just such places. Central Office The Farm Brokers' Association, Inc., Ossida, N. Y. Other offices throughout the State.

PATENTS

IDEAS WANTED—Manufacturers are writing for patents procured through me. Three books with list hundreds of inventions wanted sent free. I help you market your invention. Advise free. R. B. Owen, 50 Owen Bldg., Washington, D. C.

Tractor Demonstration and Farm Bureau Meeting

Eighteen Hundred Western New York Fruit Growers Witness the Tractor Demonstration and Discuss Marketing their Great Crops.

About eighteen hundred fruit growers assembled at Hilton, New York, on Friday, July 21st, in response to the announcement of an important demonstration and the meeting of the Monroe County Farm Bureau.

Tractor and dust sprayer demonstrations were conducted in the orchards immediately adjoining the prosperous village of Hilton.

It was estimated that there were a little over four hundred automobiles at the meeting. The Niagara County Farm Bureau delegates came to the meeting in sixty automobiles, three hundred strong, with the Manager, Mr. Nelson Pete at the right of the line.

The very large attendance at this meeting was strong evidence that fruit growers are greatly interested in tractors. Since the tractor has been improved, and with some of the cumbersome features removed, fruit growers are quick to take advantage of this feature of machine farming.

Fruit growers cultivate and stir the soil continuously through the summer. Therefore, their need of a tractor is even greater than that of the ordinary cereal farmer.

W. D. Auchter, of Elm Grove, who was the first president of the Monroe County Farm Bureau said, "My Tractor has helped me out of many a difficulty that would worry me when I had to depend on men and horses. There are times when planting must be done within a certain time. Tractors can be worked all night if necessary. I have used mine from the break of day until 12:30 at night, putting a big search light on the front when it got dark."

It was demonstrated that the average tractor can do practically anything that horses and men can do in the way of plowing, harrowing or such things. Traveling at a speed of two and a half miles an hour and developing greater traction than four horses, it is said to be five times as efficient as a team and a man. One man is required to drive the tractor and operate the apparatus attached.

More than a thousand people attended the meeting in the afternoon. The principal addresses were made by E. B. Holden, chairman of the General Committee; President George W. Dunn, of the Farm Bureau; Fred S. Welsh, agriculturist of the New York Central Railroad; Charles S. Wilson, state commissioner of agriculture; Roland B. Woodward, secretary of the Rochester Chamber of Commerce.

Mr. Welsh, who is making a study of the peach industry in Western New York with a view to a more efficient marketing of the crop, sought to interest the growers in a scheme whereby they would cooperate with the New York State Fruit Growers' Association and the New York Central railroad to send their product, so far as possible, to the places where it could

be marketed to the best advantage. This is to obviate the recurrence of the glutted market which occurred last year and to maintain price standards.

The idea Mr. Welsh propounded was to provide a central office, to be directed by the Fruit Growers' Association and assisted by the railroad and the Federal government. In this way the growers would be provided with a market news service, with a check on all markets from information obtainable before the unloading of cars at the destination originally consigned to them.

Packing and Grading Law.

"It is possible," Mr. Welsh said, "that a peach day will be instituted in order that the one week in the season which usually has the heaviest market may be disposed of without inconvenience. An advertising campaign would be made and housewives urged to do their preserving and use as many peaches as possible during the week. This period probably would be the second or third week in September this year."

In regard to the apple picking and grading law, Commissioner Wilson gave two suggestions to the growers. The first was that they include in the marking of their barrels the date of packing, so that the grower would be relieved of responsibility in case of diseases maturing after packing. Secondly, he expressed the hope that the growers of this section are sufficiently awake to the situation to make the apples at the top of each barrel representative of the entire lot.

Several dusting and spraying demonstrations were conducted in orchards near the village. Dr. Donald Reddick, professor of plant pathology at Cornell, gave short talks on the two methods. The demonstrations were in charge of Professor Cyrus R. Crosby, Dr. F. M. Blodgett and C. B. Savage.

There were parked in the village between three and four hundred automobiles, in which visitors came from Wyoming, Niagara, Orleans, Wayne, Ontario, Genesee and Livingston counties. Scarcely a horse and carriage was to be seen, another commentary on the modern trend of things.

The Pleasures of Youth

A public school teacher once put this question to her pupils:

"Which would you rather have—three bags with two apples in each bag, or two bags with three apples in each bag?"

"Three bags with two apples in each bag," was the surprising answer given by one lad, while the rest of the class was struggling with the problem.

"Why, Harry?"

"Because there'd be one more bag to bust!"

—Kansas City Journal.

Strawberry Mulching Cheapened

Editor of Green's Fruit Grower: One of the most perplexing problems which confronts the commercial strawberry growers of New England and the more Southern Atlantic Coast States has been the matter of providing good mulching materials for strawberries at a reasonable cost. An ideal mulch must protect the plants during winter months from the "heaving" action of frosts and should retard the loss of moisture from the soil during the growing season. Further, a desirable mulch should be of such a character as to be able to keep down weed growth during the fruiting season when cultivations of the soil, because of the necessity of keeping the fruit clean, is prohibitive. Again, if in addition to being able to accomplish these ends the mulch in decaying will add plant food or valuable humus to the soil it is all the more valuable.

Wheat or oat straw; coarse or strawy manure; and marsh hay have been most commonly used by commercial growers as mulches for strawberries, but in certain parts of the country, where as much as eighteen dollars a ton is asked for straw and where manure in sufficient quantities cannot be secured even when as high as eight dollars a ton is offered, the cost of mulching strawberries is sure to eat into the profits to the extent of from fifteen to twenty-five dollars an acre. A successful grower in Massachusetts has met this situation to his satisfaction in a practical way. He follows what is known as the narrow, matted row system of culture. This consists of starting the plants on land which has been well fertilized and thoroughly cleansed of weeds by having been planted for two years previous to cultivated crops. The plants are set about fifteen inches apart in the row and the rows are spaced four feet apart. Runner plants are encouraged to grow until the entire width of an eighteen-inch row is matted over. From the time the plants are set out until the fruiting season of the older producing beds is over the soil is cultivated after every shower or about every ten days if no rain intervenes. The rows of the old beds are then narrowed down with a cultivator to the desired width and the soil which has become more or less compacted is again made friable. Then the space between the rows of both the old and the new plantings is seeded to barley. It does not take long for the grain to occupy the ground to the exclusion of weeds and this naturally dispenses with the otherwise laborious and costly summer tillage. By fall the barley has produced a good growth of straw so that if a mowing machine, with the cutter bar tilted up in front sufficiently to prevent digging into the ground, is run over the bed an effective mulch results. With the aid of a fork the straw so produced is then scattered uniformly over the matted rows. In exceptional seasons, when the barley for some reason or other fails to make sufficient growth, additional straw can be used to increase the thickness of the bed cover. However, even when this is necessary, the saving of labor which would otherwise be required to get rid of weeds if the barley were not sown between rows, together with the value of the mulch itself, make this method or modifications of it practicable.

—C. A. LeClair, Mass.

Welcome Change

"You look blue and discouraged, old man."

"I'm not myself this morning."

"Well, that's nothing to feel so bad about."—Boston Transcript.

In Your September Copy of Green's Fruit Grower

you may find a renewal blank. If you do, it will mean that your subscription has just recently expired and should be renewed at once to make sure of your getting every issue. Use the blank as soon as you find it.



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REAL ONES

So light a woman can handle, so strong they cannot break. Single, Extension, Step and Fruit. Write for catalog and get them at Winter Discounts. The Berlin Fruit Box Co. BERLIN HEIGHTS, OHIO

AGENTS AT LAST—A Safe & Self-Heating Iron

The only KEROSENE (coal oil) iron in the world



THE KERO-SAFE

Sample FREE to Workers

THOMAS IRON CO., 2178 Gay St. Dayton, O.

GINSENG AND GOLDEN SEAL

Make more money in your back yard growing these two plants than most people make off a 100-acre farm. As a money maker nothing will equal it. Seed, 25¢ per package; 3 packages, 50¢. Copy of "How to grow Ginseng and Golden Seal" free with each order for seed. Order seed now for fall planting. Catalog free.

Burgess Seed & Plant Co., 219 F. St., Galesburg, Mich.

Parcel Post Boxes

The safest and most economical way to ship dairy, truck and fruit produce. Any size box, light, easy-to-handle, strong, fine for shipping. We also make Andrews Efficiency Egg Carriers, the safe, sure way to ship eggs. Write today for descriptive catalog. Free!

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Galloway's wonderful book of bargaining describes fully and prices Galloway Cream Separator, Heavy Spreaders, Gasoline Engines, Farm Tractors. Save 1-3 to 1-2 on prices usually asked. Also lists and prices farm implements, (sewing, auto supplies, everything for farm and household).

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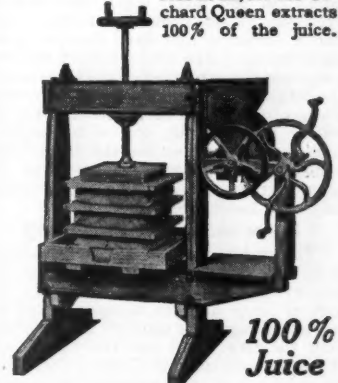
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Write for List of Patent Buyers and Inventors Wanted. \$1,000,000 1 prize offered for inventions. Send sketch for free opinion as to patentability. Our four books sent free. We assist inventors to sell their inventions. VICTOR J. EVANS & CO., Patent Attys., 621 Ninth, Washington, D. C.

Turn Waste Apples Into Good Profits

WITH an Orchard Queen Cider Mill you can make your windfalls, culls and unmarketable fruit pay you 50 cents a bushel. No waste or loss at all, for the Orchard Queen extracts 100% of the juice.



100% Juice

The ORCHARD QUEEN CIDER MILL

Simplest, easiest-operated, cleanliest and most efficient of all cider mills. Doesn't crush the apples, but grates or grinds them, breaking the juice cells so that when pomace is pressed in its sanitary cloth-lined forms, all the juice is extracted. Easily operated by either hand or power. Strongly built in one size only—sold at a low price.

Write today for folder describing the Orchard Queen Cider Mill and showing how to convert your orchard losses into profits.

Puffer-Hubbard Manufacturing Co., 3220 26th Street, East, Minneapolis, Minn.



The Tractors at Work

Health Department

"Your health is worth more than it can possibly cost you."

—Samuel Johnson.

MORE DISEASE IN RURAL DISTRICTS THAN IN CITIES

Also Due in Part to Artificial Selection, Best of Country Boys Going to City —Farmers' Homes Ill Ventilated and Often Unsanitary

There is more ill-health, more disease, among children and adults in rural America today than in our cities," said Dr. Thomas D. Wood of New York, chairman of the Committee on Health Problems in Education, of the National Education Association, in an address before the Illinois State Charities Conference here yesterday. Dr. Wood said he made this assertion "regretfully but confidentially" and declared that it was sustained by the unprejudiced study of statistics gathered from many sources showing that country children attending the rural schools were less healthy and were handicapped by more physical defects than the children of the city, "including all the children of the slums." This was true, he said, in general of all parts of the United States.

Problem of Rural Life in General

"The problem, then, of bringing about sufficient improvement in the healthfulness of rural life to provide a worthy birthplace and nursery for the best human stock, is not simply a problem of the rural school, of the farm, of a rural life in general, but it is a great, pressing problem of the nation affecting national safety, national prosperity and national perpetuity.

"The most important reasons for the present physical inferiority of the people in the country are the following:

"Artificial selection, during the last half century especially, has drawn much of the best human stock from the country to the cities. Before that time the tide in the movement of population apparently carried more good human material to the rural regions than away from them.

"The second reason for the physical inferiority of country people in general is that the science and art of human living, of conserving and improving human health and general human welfare, have advanced much more rapidly in the cities than in the country district. The problems of safety and comfort as affected by congestion of population and many other conditions of urban life, have thrust themselves upon human attention and have received much consideration. The art of human care has progressed much more slowly in the country. The father in the city spends on the average, a larger percentage of his income for the welfare of his family and of his children than does the father on the farm. The farmer relatively raises everything else more carefully and, as a rule, more successfully than his children.

Home and School Unsanitary

"The third condition which helps to explain this astonishing inferiority of the country child is the environment. The country home and the country school are, on the average, less sanitary and healthful than the city home and the city school. It has been assumed that because the country child has all the features of the country he is, of course, surrounded by fortune and wholesome conditions. But the possession of all outdoors is far from enough. The farmer's home is, as a rule, unsanitary in many respects. It is often terribly unventilated and the dwellers in the house are fed many hours a day with bad air. Country water and food are less wholesome than water and food in the city. The standards of living on the American farm, when tested by the accepted principles of sanitation and hygiene, are alarmingly defective.

"The rural school, from the standpoint of health and general fitness for its important use, is the worst type of building in the whole country, including not only all types of buildings used for human beings

but also those used for live stock and all domestic animals. Rural schools are, on the average, less adequate for their use than prisons, asylums, almshouses, stables, dairy-barns, pig-pens, chicken-houses, dog-kennels are for their uses.

Value of a Fruit Diet

Apples, oranges, pears, peaches, lemons, strawberries, blackberries, raspberries—in fact, all the various acid fruits—are exceedingly wholesome in character, and are capable of furnishing a very large amount of nourishment in one's daily diet. Strange as it may seem to the average individual, almost any one of these fruits, lemons excepted, would fully and completely nourish the body for a prolonged and even an extended period if one were for any reason compelled to secure nourishment entirely from food of this character although of course, it would require a considerable period for the organs of assimilation to acquire the habit of absorbing all needed nourishment if a radical dietetic change of this nature was made.—"Physical Culture."

If elderly persons generally would be careful to leave five hours between the end of one meal and the beginning of the next, and eat nothing between, they would as a rule live longer, and enjoy better health.

It is more important that the teeth be cleansed thoroughly at night before retiring than at any other time. A good alkaline mouth wash should be used. Rinse it thoroughly through the teeth by means of the tongue. Hold the liquid in the mouth two or three minutes. The mouth with this treatment is put in an anti-acid condition and offsets to a large degree injury to the teeth from acids. Use a fairly stiff tooth brush.

Dismiss work, worries, business cares and annoyances while eating. Good cheer promotes good digestion.

Headache is most common in middle age, and if it occurs often in a child or in a person over sixty, it is a sign that something is wrong. Usually the trouble is with the nose, throat, ears, or eyes in the young, and with the arteries or kidneys in the old.

HOW TO LIVE A CENTURY

Illinois Centenarian Gives Rules that Guided Him in Life

How to live to be 100 years old was told by "Uncle Cape" Stanley, the centenarian of Downers Grove, Ill.

Here are some of the rules that have governed his own life, seventy-four years of which have been lived in Chicago's western suburb:

Mind your business.
Don't quarrel with your neighbor.
Pay for what you get when you get it.
Live within your means.
Laugh every time you find something to laugh at.

Don't eat between meals.
Eat plain food and plenty of it.
Don't drink intoxicating liquors.
Keep up your interest in the news of the world.

Go to bed early with a clear conscience and get up with the birds.

Sleep eight to nine hours out of twenty-four.

Don't worry about things you can't help.
Work and exercise outdoors as much as possible.
Keep your thoughts pure.
Don't smoke or chew tobacco.
Memorize Bible verses.
Remember your obligations to your Creator.

During the interview, which lasted almost an hour yesterday afternoon, Mr. Stanley took a keen interest in the comments made by his daughter, Mrs. Alice S. Edwards, and his wife, who celebrated her 80th birthday on Christmas Day. Up to within one week ago, when he was attacked by the grippe, from which he is now suffering, he read the newspapers every morning. He said he could read the headlines without glasses.

"I've always been a Republican," he said.

There are few dwelling house cisterns which are kept clean enough for the storage of drinking water. Dust and dirt accumulate on the roofs of all buildings and are washed into the cisterns by the heavy show-

ers and long storms of spring and autumn, which adds to the impurity of cistern water. The Board of Health of Rochester, N. Y., advises all excursionists, tourists, and vacationists not to drink water from any spring or well in traveling through the rural districts unless the water is boiled.

Experience with False Teeth

Editor of Green's Fruit Grower:—I had my first and only set of plates—double—put in just after I was 85 years old in January, 1910—and I had to go to Denver to get them, as my regular Dentist discouraged my having them; his idea being that I was too old to break them in. The Denver Dentist was an old friend and, after an examination lasting quite a while, said "I can fit you so that you can eat with them and enjoy your food." I told him to "go ahead," and he made them and inserted them. I wore them to the train and took them out and put them in my coat pocket, but the next morning I put them in, wore them while I tried to eat my breakfast. I felt as if I had a bag of bones in my mouth, and took them out immediately after the meal and I think that it was weeks before I wore them between meals. The food didn't taste natural, but, after some months, my food began to have flavor and taste naturally and they were broken in. But even now I take them off at night and put them in a tumbler filled with water. This saves them from damage and you always know where they are when not in the mouth. Then the gums need attention and are likely to be tender and an old doctor friend in Greeley told me what he did; which was to gargle a little solution of Tannin—30 grs. to ounce of Alcohol—every morning, which I do, and so wear my teeth with comfort. I have given you my experience, as it is in this way that we learn.—Subscriber.

Aunt Hannah's Replies

THE OLD STORY

How Can I Hold Him

Dear Aunt Hannah: I am nineteen years old and have been receiving the attention of a young man nearly my own age. He has been going with me several months and seemed to be very fond of me. He went away to work and has never written to me. What is best for me to do? Shall I try to forget him and never have anything more to do with him if he comes back? Do you think he really cared for me? Do you think I am old enough to choose my own company? I have finished my high school course the last year.—Brown Eyes.

Aunt Hannah's Reply: I receive many letters like the above from young girls who express anxiety as to how they shall hold or win the love of some individual. This



The consumer of apples as shown in the above illustration goes by the doctor's office without stopping. Notice the cobwebs in the window of the office devoted to the calls of those who do not eat apples plentifully.

is a serious problem and one which for the most part must be answered by the inquirer who is the person most interested.

It seems natural for the girl who has received some attentions from a young man to feel that the young man is smitten by her charms and is waiting for an opportunity to propose marriage, but such often is not the case. Young girls should bear in mind the fact that a young man's fancy is almost as fickle as an April day, and that he may call upon or wait upon at various times a dozen or more girls before he selects one to be honored by a proposal of marriage. He may be in search of a wife and sincere in hoping that his attention to you may result in marriage, but this hope may be dispelled and he may look elsewhere for a life companion. The girl who is constantly assuming that the young man who pays her attentions is to propose marriage is continually in trouble.

If your young man has left for another town and your pleasant relations are cut short, this may be the end of your relation with him, or possibly it may not. It may be that a year or several years hence he may awake to the fact that you have a charming personality, that you are a good Christian girl, worthy of a nice home and a good husband, thus he may come back to you. In my opinion you would gain nothing by chasing after him or in endeavoring to get him to correspond with you.

It is not only young girls who are troubled as you are. Young men have experienced similar disturbances of mind. If a young man is made welcome at the home of a girl friend, or if she accepts his escort for lectures, attendance at church or drives, he is liable to assume that the girl is in love with him, whereas in many instances she is not.

Tragic End of a Twenty Years' Courtship

By Aunt Hannah

I am asked this question: "How much time before marriage should be devoted to courtship?" My reply must be somewhat indefinite, for many things must be considered before marriage. The interested parties must ask themselves: "Have we the necessary funds to begin housekeeping, for furnishing and making a house comfortable, and for the yearly expenses that naturally follow?" The question of age is important. But I would in no instance recommend a courtship to extend beyond three, four or five years. I hear of hasty marriages, where parties who have met today are married next week, or in some instance, tomorrow. While some of these happy-go-lucky marriages may turn out well, no wise person could commend such a course, for it is not possible to learn of the character and qualifications of an individual in a few days, weeks or months.

I have heard recently of a courtship which extended to twenty years, and then the girl learned that the man had decided not to wed her. Consider for a moment the patience this poor girl must have exercised in waiting for this man to do as she should have done, that is married the girl and established himself in life. But some men are ever wavering, never ready to decide even the most ordinary business transaction. If they are thinking of buying a suit of clothes, a pair of shoes or a hat, they put it off and put it off in an exasperating manner. It is the same in getting married. They are like the boy who, desiring to learn how to swim, stands shivering on the bank of the stream, not daring to take the initial plunge.

The poor girl who waited twenty years for this man to marry her must at the end of that long term have become crazed on realizing fully that her youth had departed, age and a wrinkled face were approaching, the great prize of life had disappeared. Her brain was in a whirl, she seized a revolver and shot her hesitating lover, after which she attempted suicide by cutting her own throat.

Too Cruel

Harvard Lampoon

"I can't find any old clothes to put on the scarecrow," said Farmer Cornassel. "You might use some of the fancy duds our boy, Josh, brought home from college," suggested his wife.

"I'm only tryin' to scare the crows, not to make 'em laugh themselves to death."

Green's Fruit Grower

Producing Better Fruits

A large portion of what has been accomplished in the improvement of plants has been done by the casual worker, the novice, and until recently without any specific aim. Primitive man no doubt began the process of selection and development that has resulted in our present possession of types of cultivated plants so far superior to the wild forms. Nature produced the original forms, says C. E. Houdyshel in Los Angeles Tribune.

When man began to cultivate the apple he naturally saved the seed of those wild forms that most pleased his taste. Some of the seedlings he did not like, hence the trees were not cared for, perhaps were removed. One of the seedlings proved superior to others and his neighbors planted seeds from that one. Let this process continue for thousands of years and we can readily judge what the result would be. Some such process as this was no doubt the method by which improvement resulted in all our cultivated plants until comparatively recent times.

During the last one or two hundred years the science of plant breeding has received such attention and the discoveries have been so applied that the development and improvement has been greater than that of as many thousand years before.

By no means has the imagination of man conceived of the new forms that are yet to come forth. What a privilege it would be to be able to see the plants that man will have developed at the end of the next hundred years. Scarcely anything can be called impossible.

Facts for the Curious

The Belgians are the greatest potato eaters in the world, and the Irish come second.

Except along the Caspian coast, Persian agriculture is dependent almost entirely on irrigation.

About 25,000 pounds of American salt pork is being consumed daily in the city of Copenhagen, Denmark.

An inventor in Russia has developed a method for making felt boots and knit goods from dog hair.

During the last year 79,281,735 short tons of sand and gravel, having a value of \$2,846,999, were dug out in the United States.

Measures have been taken by the Dutch authorities to prevent the extermination of birds of paradise in the Dutch East Indies.

There is a species of fish in Africa which has lungs so that it can breathe and remain alive when the rivers in which it lives become dry.

The old notion that caged birds on being set free are immediately set on and killed by wild birds, has been found by experiments to be untrue.

Recent excavations of an ancient Roman villa, near Liege, disclosed fragments of coal, leading to the belief that the fuel was mined in Belgium as far back as the beginning of the Christian era.

A rhinoceros rolls in the mud because little insects get between the folds of its skin and worry it. If it gets its body covered with mud, they are unable to reach the skin.

Pulmonary tuberculosis is being treated by a Danish physician with air that has been subject to the action of ultraviolet rays, which seems to have a healing effect when inhaled through the mouth.

Hepsey, the maid of color, had told the mistress she was to be married.

"Well, Hepsey," said the mistress, "I'm sorry to lose you, but I suppose it is all for the best. How long have you known the man?"

"About two weeks, ma'am."

"My! No longer than that? Don't you think you ought to wait and get to know him better?"

"No, ma'am," exclaimed Hepsey. "Ef I knowed him any better I sho' never would marry him."—Judge.

Gasoline Seven Times More Powerful Than Dynamite

Do you know that gasoline gas is seven times more powerful than dynamite? asks the National Cash Register News in an article on the use of gasoline with safety in the home. Gasoline is a thin, water white liquid which evaporates rapidly and throws off vast quantities of vapor very inflammable and explosive when mixed with air.

Substances like cotton, linen, silk, especially when unwashed and undyed, become more or less electrified when rubbed or moved quickly in a bath of gasoline, the gasoline becoming negatively charged. Gasoline being a bad conductor, the generated electricity accumulates and reaches such tension that sparks are possible, igniting the gasoline and causing fire and explosion. Weather conditions affect the results decidedly, the dry air of winter being more dangerous than moist summer air. Gasoline explosions in garages are often brought about by static electricity, a fact definitely proved.

In case of fire tight cans are liable to explode, throwing the burning gasoline all over the premises, thereby augmenting the fire. For this reason gasoline should be stored outside the house, preferably in safety type cans (cans with fine wire gauze in neck and spout.)

Gasoline used for cleaning should be used outdoors, at least fifty feet from any fire, light or burning substance, never in an in-

nuts you have concentrated food equal to more than a pound of beef steak.

Walnuts, like meat and butter, which they most resemble, should, to get the best results, be eaten along with bread and other less concentrated food and should be thoroughly masticated.

Queer Fruit Growing Propositions

Mr. C. A. Green: I received a letter with a proposition which seemed good. The idea is this: My mother will furnish the land and I the trees and set them out. Then I raise, between the trees, crops, such as are necessary for the good of the trees as to cultivation. These crops to be considered on shares same as is done with cleared land. My mother's share of these crops to be mine until one-half of the tree expense had been paid to me. This would leave me with my money back for the expense of setting the trees, and then we each would divide the crops grown between the trees and the apples when they come along. My mother will sign a contract giving me the first chance to buy this piece of land at a price considered without trees or improvements, and if she died without selling the property this land would be part of my share in the estate at a valuation for cleared land. She asked how many years we should state before we would stop raising crops. Because when the trees begin to bear apples we would divide, she one-third and myself two-thirds. I don't know

Getting Rid of Chickweed

Mr. C. A. Green: Will you kindly through your valuable paper, advise me if there is any way of getting rid of chickweed in the garden.—E. E. Lopus, Pa.

Reply: Chickweed is a terrible pest, particularly among strawberry plants. It is most annoying in wet seasons or where plants are growing in shady places. It is difficult in weeding it to get out all the roots, which send out new shoots, which make labor continuous. I would not advise planting strawberries or anything that must be weeded by hand on soil infested with chickweed.

Apples Don't Keep

Green's Fruit Grower: Last fall my apples were put into cold storage and stayed there until the latter part of April and fore part of May. When they came out some of the apples had dry black like rot on the surface, not very deep, but made them unsalable. These apples were picked and barreled during the month of October and went into the barrels in good shape. What could have been the cause of this condition? Some of these apples were put into the barrels wet, some from dew and some from rain. Would this affect them? Could there have been something wrong in the storage building that would cause this? These apples were Ganos.

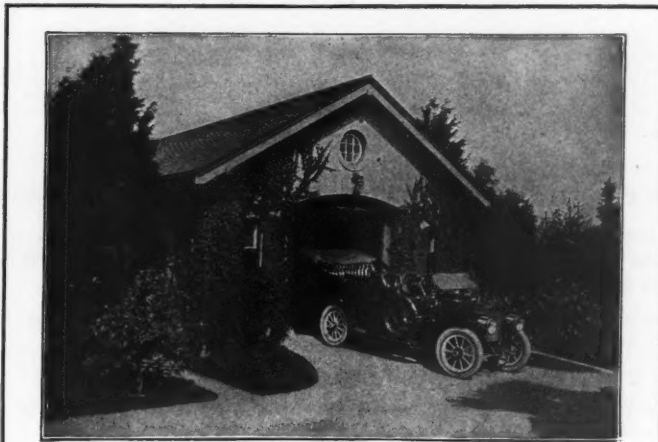
If the storage is all right how long is the Minkler supposed to keep? Out of 1800 barrels stored we lost 100 barrels from decay. Can you ascribe any cause? Seemingly these apples were packed in good shape.—S. G. Bucher, Ill.

Reply: It is likely that your apples were affected adversely by being wet when placed in the barrels, but I cannot state positively. I would not advise the packing of apples in barrels when moist or wet. Apples must go into cold storage in prime condition. They must not be exposed to warmth or sunshine which tends to ripen the fruit before placed in cold storage. There should be delay between picking, packing and placing in cold storage. It sometimes happens that cold storage house managers are lacking in skill in regulating the temperature or in otherwise attending to their duties, which may affect the keeping quality of apples.

While the best grade of cold storage houses in large cities will continue to be the method of storage for large buyers or large producers, my advice to the average orchardist is to sell his fruit in the fall, if it is possible at that season to secure a fairly profitable price, without attempting to place his fruit in cold storage with the uncertainties connected therewith, or to keep it in common dwelling house cellars.

Really an Art

The art of boiling a potato, one would think, was the simplest thing in the world; but, as a matter of fact, it is astonishing how few people seem to know anything about it and consequently potatoes come to table soggy, hard in the middle, or all crumpled up, instead of mealy, white lumps of deliciousness, as they ought. The most general mistake is that they are boiled too rapidly and not enough, and are then not properly drained. Here is the right method. Put the potatoes in enough boiling water to cover them well, add a pinch of salt, and then boil gently but constantly. That is to say, keep the water boiling all the time, and do not permit it merely to simmer. Keep the lid on. When they are down long enough to stick a steel skewer or a kitchen fork into the largest you have, and if it is tender right through, turn all the potatoes into a colander, so that all the water may be poured off. Then return them to the saucepan, cover with a dry, clean cloth; leave the lid off and put by the side of the stove for a few minutes to permit them to dry out. This is the genuine Irish way of boiling potatoes, so that they may be mealy and "laugh."



The above is a cut of an attractive house for storing an automobile. Such a building need not be large nor expensive. Many farmers have barn room enough without building an additional structure for storing the automobile.

closed room. The heavy vapors travel long distances and are highly explosive. Never clean gloves on the hands. The rubbing or agitating of clothing in gasoline should be accomplished by means of a dry stick.

Gasoline stoves should never be filled with a light or fire within fifty feet of the stove.

English Walnuts

Walnuts are rich in easily digested oils which act as a lubricant to the entire alimentary canal, especially the lower part of the smaller intestines and region of the appendix where the major part of the digestion of nuts takes place, says The Walnut Book.

In some of the lower animals, such as rabbits and tree squirrels, the "selective sense" of the intestines carries the nut portion of the food directly to the appendix, which in them is a large funnel-shaped organ whose functions seem to be the caring for this more concentrated portion of their food. Perhaps the appendix of man had the same function before it went into the atrophy of disuse, when man became carnivorous. At any rate I think it would be safe to state that if we prevent intestinal irritation and constipation by keeping our appendix well lubricated by the use of walnuts, we will have as safe a preventive for appendicitis and other intestinal troubles, as by using olive oil or the indigestible Russian paraffine oil, and will be getting an excellent food besides.

In eating walnuts one should remember that they are a concentrated food and that twenty-two of the larger and forty of the medium sized walnuts weigh a pound, so that when you eat ten of the larger wal-

whether this would be about the right proportion or not. I would set the trees and pay for all the work incident thereto, as well as cultivating and raising the crops. In the meantime I would pay for pruning, spraying and for all care of the trees until they took up the land so we could not raise any other crop except cover crops. For this expense I am to receive a share in the trees, which, when we begin to pick apples will be divided between us.

How long do you think we will be able to raise crops between the rows of trees? I had in mind setting them 25 feet each way using early bearing trees as fillers which will leave the permanent trees 50 feet apart.

What share seems right as a basis for dividing the apples, or returns from the sale of apples, according to this proposition? Her idea seems to be that the trees will be mine.—Subscriber, N. Y.

Reply: Your problem is too much for a busy man like myself to attempt to solve. You will need first a lawyer, and second an experienced fruit grower to visit your place and inspect the land and learn all the conditions. Generally I advise my friends to have nothing to do with such a deal as you propose to make, for it is too vague, too uncertain, too much of a mix up. There is nothing definite about it. There is trouble enough in this world when the issues are clearly defined. The conditions and possibilities and impossibilities and disasters that may occur, and your inexperience or experience, your failures or your successes, all enter into the problem and make it one that no person can answer to your satisfaction.

Much depends upon where your orchard

AUTUMN PLANTING

Make Your Tree and Plant Selections *Now*



Carolina Poplar

Hardy Catalpa

Norway Maple

There Are Two Big Reasons Why You Should Plant in the Fall

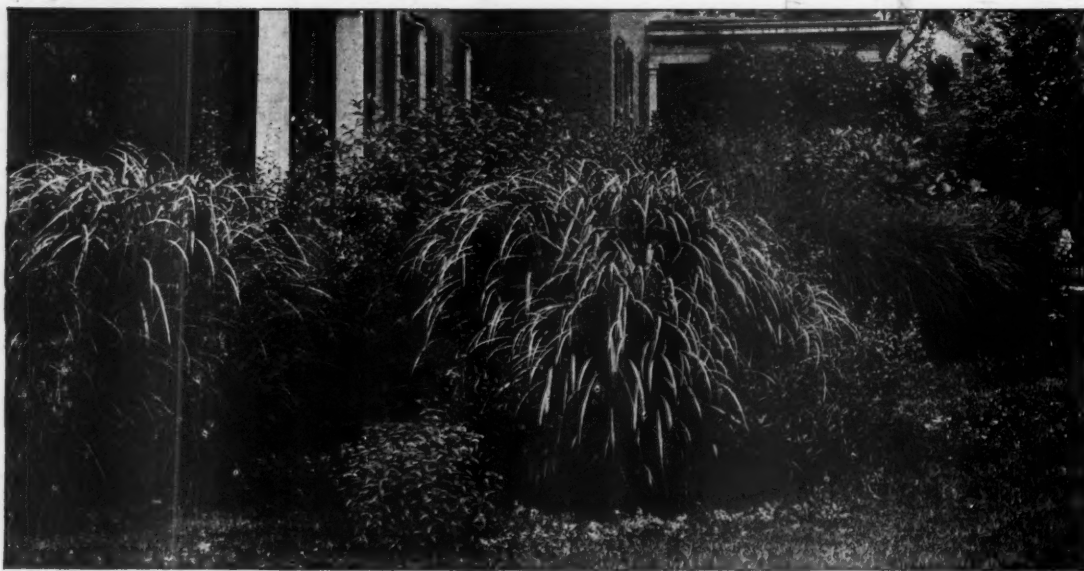
First—Fewer trees and plants die when planted in the fall. Small roots develop this fall before the cold weather retards their growth. They become well established so that next spring this autumn's planted currants and plants will start to grow much earlier than currants planted the same spring.

Second—With you, spring is by far the busiest time of the year. In the fall, you have more time. We have done much fall planting and have had the greatest success with everything we have set out in the fall.

Many fruit growers claim that Fall planting gains nearly a year's growth over spring planting.

Fall is the time to plant Ornamental Trees, Shrubs and Plants, Currants, Gooseberries, Raspberries, Grape Vines, Apple, Pear Trees and everything that is hardy.

Order Plants, Vines and Trees for fall planting now. We commence to dig trees October 1st and continue to dig and ship them until winter sets in. October and November are the months to plant in the fall. CATALOG FREE ON APPLICATION.



A Beautiful Planting of Ostrich Plume, or Ornamental Grass

Green's Nursery Co., 91 Wall Street, Rochester, N. Y.